

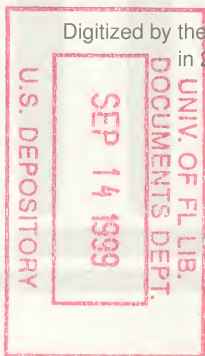
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# CONTRAILS



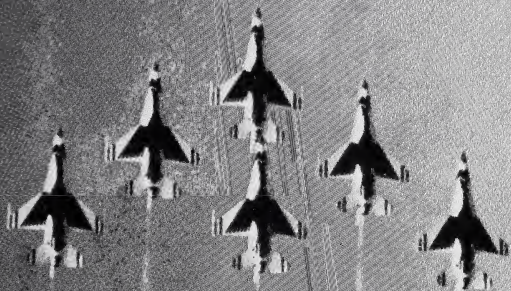
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Air Force Academy  
Cadet Handbook

# CONTRAILS



Volume 45  
1999-2000

United States  
Air Force Academy  
Colorado

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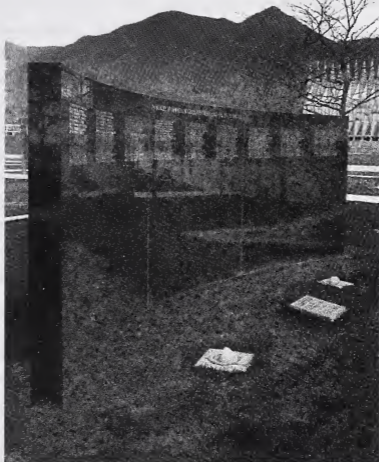
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“The most important thing I learned is that soldiers watch what their leaders do. You can give them classes and lecture them forever, but it’s your personal example they will follow.”

**General Colin Powell**  
**Former Chairman, JCS**

Air power has progressed at a phenomenal rate since 1903, and with it the Air Force. You are beginning training which will enable you to be an integral part of the nation's first line of defense, but you must take only one step at a time as did the Air Force. Basic Cadet Summer is your first step toward becoming a professional cadet, just as being a professional cadet is the first step toward becoming a professional officer.

This handbook introduces you to basic military concepts, the Air Force and its heritage, the Academy, the cadet program, as well as the other military services. You, as cadets, are but a small part of the whole, but each, nonetheless, is important. Strive to do your absolute best in every undertaking. You owe it to yourselves to understand what is being taught. Understanding, plus maximum effort, will make you a better cadet and, more importantly, a better officer.

While every effort was taken to insure that CONTRAILS is as up-to-date and reliable as possible, the nature of the rapidly changing Air Force may make some of the information in this book out of date even as it is published. Current information may be obtained from your Military Art and Science Instructor, your Air Officer Commanding, or your cadet chain of command.

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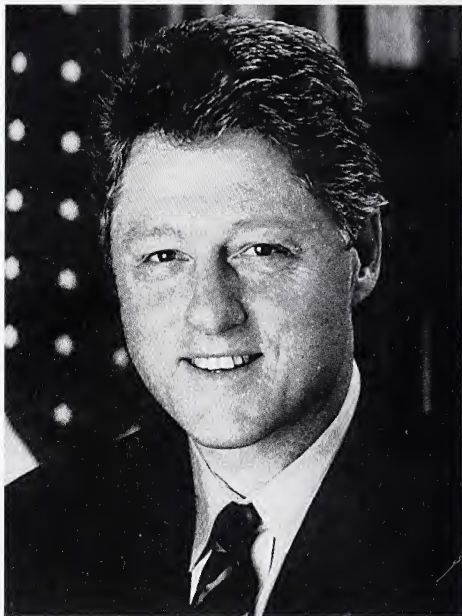
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# National Section





William J. Clinton  
President of the United States of America  
and Commander-in-Chief

# The Constitution of the United States

We the people of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defense, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity do ordain and establish this CONSTITUTION for the United States of America.

## Article I

### Section 1.

All legislative powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.

### Section 2.

(1)<sup>1</sup> The House of Representatives shall be composed of members chosen every second Year by the People of the several States, and the Electors in each State shall have the Qualifications requisite for Electors of the most numerous Branch of the State Legislature.

(2) No Person shall be a Representative who shall not have attained to the Age of twenty-five years, and been seven Years a Citizen of the United States, and who shall not, when elected, be an Inhabitant of that State in which he shall be chosen.

(3) Representatives and direct Taxes<sup>2</sup> shall be apportioned among the several States which may be included within this Union according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons.<sup>3</sup> The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of Ten Years, in such

Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty Thousand, but each State shall have at Least one Representative; and until such enumeration shall be made, the State of New Hampshire shall be entitled to choose three, Massachusetts eight, Rhode Island and Providence Plantations one, Connecticut five, New York six, New Jersey four, Pennsylvania eight, Delaware one, Maryland six, Virginia ten, North Carolina five, South Carolina five, and Georgia three.

(4) When vacancies happen in the Representation from any State, the Executive Authority thereof shall issue Writs of Election to fill such Vacancies.

(5) The House of Representatives shall choose their Speaker and other Officers; and shall have the sole Power of Impeachment.

### **Section 3.**

(1) The Senate of the United States shall be composed of two Senators from each State, (chosen by the Legislature)<sup>4</sup> thereof, for six Years, and each Senator shall have one Vote.

(2) Immediately after they shall be assembled in Consequence of the first Election, they shall be divided as equally as may be into three Classes. The seats of the Senators of the first Class shall be vacated at the Expiration of the second Year, of the second Class at the Expiration of the fourth Year, and of the third Class at the Expiration of the sixth Year, so that one-third may be chosen every second Year, (and if Vacancies happen by Resignation, or otherwise, during the Recess of the Legislature of any State, the Executive thereof may make temporary Appointments until the next Meeting of the Legislature, which shall then fill such Vacancies).<sup>5</sup>

(3) No person shall be a Senator who shall not have attained to the Age of thirty Years, and been nine Years a Citizen of the United States, and who shall not, when elected,

be an Inhabitant of that State for which he shall be chosen.

(4) The Vice President of the United States shall be President of the Senate, but shall have no Vote, unless they be equally divided.

(5) The Senate shall choose their other Officers, and also a President pro tempore, in the absence of the Vice President, or when he shall exercise the Office of President of the United States.

(6) The Senate shall have the sole Power to try all Impeachments. When sitting for that Purpose, they shall be on Oath or Affirmation. When the President of the United States is tried, the Chief Justice shall preside. And no Person shall be convicted without the Concurrence of two thirds of the Members present.

(7) Judgment in Cases of Impeachment shall not extend further than to removal from Office, and disqualification to hold and enjoy any Office of honor, Trust or Profit under the United States, but the Party convicted shall nevertheless be liable and subject to indictment, Trial, Judgment and Punishment according to Law.

#### **Section 4.**

(1) The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations, except as to the Place of Choosing Senators.

(2) The Congress shall assemble at least once in every Year, and such Meeting shall (be on the first Monday in December,)<sup>6</sup> unless they shall by Law appoint a different Day.

#### **Section 5.**

(1) Each House shall be the Judge of the Elections, Returns and Qualifications of its own Members, and a Majority of each shall constitute a Quorum to do Business; but a smaller number may adjourn from day to day, and may be authorized to compel the Attendance of absent Members, in such Manner, and under

such Penalties as each House may provide.

(2) Each House may determine the Rules of its Proceedings, punish its Members for disorderly Behavior, and, with the Concurrence of two thirds, expel a Member.

(3) Each House shall keep a Journal of its Proceedings, and from time to time publish the same, excepting such Parts as may in their Judgment require Secrecy; and the Yeas and Nays of the Members of either House on any question shall, at the Desire of one fifth of those Present, be entered on the Journal.

(4) Neither House, during the Session of Congress, shall, without the Consent of the other, adjourn for more than three days, nor to any other Place than that in which the two Houses shall be sitting.

### **Section 6.**

(1) The Senators and Representatives shall receive a Compensation for their Services, to be ascertained by Law, and paid out of the Treasury of the United States. They shall in all Cases, except Treason, Felony and Breach of the Peace, be privileged from Arrest during their Attendance at the Session of their respective Houses, and in going to and returning from the same, and for any Speech or Debate in either House, they shall not be questioned in any other Place.

(2) No Senator or Representative shall, during the Time for which he was elected, be appointed to any civil Office under the Authority of the United States, which shall have been created, or the Emoluments whereof shall have been increased during such time; and no Person holding any Office under the United States, shall be a Member of either House during his Continuance in Office.

### **Section 7.**

(1) All Bills for raising Revenue shall originate in the House of Representatives; but the Senate may propose or concur with Amendments as on other Bills.

(2) Every Bill which shall have passed the House of

Representatives and the Senate, shall, before it becomes a Law, be presented to the President of the United States; if he approve he shall sign it, but if not he shall return it, with his Objections to that House in which it shall have originated, who shall enter the Objections at large on their journal, and proceed to reconsider it. If after such Reconsideration two thirds of that House shall agree to pass the Bill, it shall be sent together with the Objections, to the other House, by which it shall likewise be reconsidered, and if approved by two thirds of that House, it shall become a Law. But in all such Cases the Votes of both Houses shall be determined by Yeas and Nays, and the Names of the Persons voting for and against the Bill shall be entered on the Journal of each House respectively. If any Bill shall be not returned by the President within ten Days (Sundays excepted) after it shall have been presented to him, the Same shall be a Law, in like Manner as if he had signed it, unless the Congress by their Adjournment prevent its Return, in which Case it shall not be a Law.

(3) Every Order, Resolution, or Vote to which the Concurrence of the Senate and House of Representatives may be necessary (except on a question of Adjournment) shall be presented to the President of the United States; and before the Same shall take Effect, shall be approved by him, or being disapproved by him, shall be repassed by two thirds of the Senate and House of Representatives, according to the Rules and Limitations prescribed in the Case of a Bill.

## **Section 8.**

(1) The Congress shall have Power to lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defense and general Welfare of the United States, but all Duties, Imposts and Excises shall be uniform throughout the United States.

(2) To borrow money on the credit of the United States;

(3) To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes;

(4) To establish a uniform Rule of Naturalization, and uniform Laws on the subject of Bankruptcies throughout the United States.

(5) To coin Money, regulate the Value thereof, and of foreign Coin, and fix the Standard of Weights and Measures;

(6) To provide for the Punishment of counterfeiting the Securities and current Coin of the United States;

(7) To establish Post Offices and post Roads;

(8) To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries;

(9) To constitute Tribunals inferior to the supreme Court;

(10) To define and punish Piracies and Felonies committed on the high Seas and Offenses against the Law of Nations:

(11) To declare War, grant Letters of Marque and Reprisal, and make Rules concerning Captures on Land and Water;

(12) To raise and support Armies, but no Appropriation of Money to that Use shall be for a longer Term than two Years.

(13) To provide and maintain a Navy;

(14) To make rules for the Government and Regulation of the land and naval Forces;

(15) To provide for calling forth the Militia to execute the Laws of the Union, suppress Insurrections and repeal Invasions.

(16) To provide for organizing, arming, and disciplining the Militia, and for governing such Part of them as may be employed in the Service of the United States, reserving to the States respectively, the Appointment of the Officers, and the Authority of training the Militia according to the discipline prescribed by Congress;

(17) To exercise exclusive Legislation in all Cases whatsoever, over such District (not exceeding ten Miles square) as may, by Cession of particular States, and the acceptance of Congress, become the Seat of the Government of the United States, and to exercise like Authority over all Places purchased



by the Consent of the Legislature of the State in which the Same shall be; for the Erection of Forts, Magazines, Arsenals, dock-Yards, and other needful Buildings, And

(18) To make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the government of the United States, or in any Department or Officer thereof.

## **Section 9.**

(1) The Migration or Importation of such Persons as any of the States now existing shall think proper to admit, shall not be prohibited by the Congress prior to the Year one thousand eight hundred and eight, but a tax or duty may be imposed on such Importation, not exceeding ten dollars for each Person.

(2) The privilege of the Writ of Habeas Corpus shall not be suspended, unless when in Cases of Rebellion or Invasion the Public Safety may require it.

(3) No Bill of Attainder or ex post facto Law shall be passed.

(4) No capitation, or other direct, Tax shall be laid, unless in Proportion to the Census or Enumeration herein before directed to be taken.<sup>7</sup>

(5) No Tax or Duty shall be laid on Articles exported from any State.

(6) No Preference shall be given by any Regulation of Commerce or Revenue to the Ports of one State over those of another; nor shall Vessels bound to, or from, one State, be obliged to enter, clear, or pay Duties in another.

(7) No Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law, and a regular Statement and Account of the Receipts and Expenditures of all public Money shall be published from time to time.

(8) No Title of Nobility shall be granted by the United States: And no Person holding any Office of Profit or Trust under them, shall without the Consent of the Congress, accept of any present, Emolument, Office, or Title, of any kind whatever, from any King, Prince, or foreign State.

## **Section 10.**

(1) No State shall enter into any Treaty, Alliance, or Confederation; grant Letters of Marque and Reprisal; coin Money; emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts; pass any Bill of Attainder, ex post facto Law, or Law impairing the Obligation of Contracts, or grant any Title of Nobility.

(2) No State shall, without the Consent of the Congress, lay any Imposts or Duties on Imposts or Duties, except what may be absolutely necessary for executing its inspection Laws: and the net Produce of all Duties and Imposts, laid by any State on Imports or Exports, shall be for the Use of the Treasury of the United States, and all such Laws shall be subject to the Revision and Control of the Congress.

(3) No State shall, without the Consent of Congress, lay any duty on Tonnage, keep Troops or Ships of War in time of Peace, enter into any Agreement or Compact with another State, or with a foreign Power, or engage in War, unless actually invaded, or in such imminent Danger as will not admit of delay.

## **Article II**

### **Section 1.**

(1) The executive Power shall be vested in a President of the United States of America. He shall hold his Office during the Term of four Years, and together with the Vice-President, chosen for the same Term, be elected, as follows:

(2) Each State shall appoint, in such Manner as the Legislature thereof may direct, a Number of Electors, equal to the whole Number of Senators and Representatives to which the State may be entitled in the Congress; but no Senator or Representative, or Person holding an Office of Trust or Profit under the United States shall be appointed an Elector

(3) The electors shall meet in their respective States, and vote by Ballot for two persons, of whom one at least shall not be an Inhabitant of the same State with themselves. And they shall make a List of all the Persons voted for, and of the Number of Votes for each, which List they shall sign and certify, and transmit sealed to the Seat of the Government of the United States, directed to the President of the Senate. The President of the Senate shall, in the Presence of the Senate and House of Representatives, open all the Certificates, and the Votes shall then be counted. The Person having the greatest Number of Votes shall be the President, if such Number be a Majority of the whole Number of Electors appointed; and if there be more than one who have such Majority, and have an equal Number of Votes, then the House of Representatives shall immediately choose by Ballot one of them for President; and if no Person have a Majority, then from the five highest on the List the said House shall in like Manner choose the President. But in choosing the President, the Votes shall be taken by States, the Representation from each State having one Vote; A quorum for this Purpose shall consist of a Member or Members from two-thirds of the States, and a Majority of all the States shall be necessary to a Choice. In every Case, after the Choice of the President, the Person having the greatest Number of Votes of the Electors shall be the Vice-President. But if there should remain two or more who have equal Votes, the Senate shall choose from them by Ballot the vice-president.<sup>8</sup>

(4) The Congress may determine the Time of choosing the Electors, and the Day on which they shall give their votes; which Day shall be the same throughout the United States.

(5) No person except a natural born Citizen, or a Citizen of the United States, at the time of the Adoption of this Constitution, shall be eligible to the Office of President; neither shall any Person be eligible to that Office who shall not have attained to the Age of thirty-five Years, and been fourteen Years a Resident within the United States.

(6) In case of the Removal of the President from Office, or of his death, Resignation, or Inability to discharge the Powers and Duties of the said Office, the same shall devolve on the Vice-President, and the Congress may by Law provide for the Case of Removal, Death, Resignation or Inability, both of the President and Vice-President, declaring what Officer shall then act as President, and such Officer shall act accordingly, until the Disability be removed, or a President shall be elected.<sup>9</sup>

(7) The President shall, at stated Times, receive for his Services, a Compensation, which shall neither be increased nor diminished during the Period for which he shall have been elected, and he shall not receive within that Period any other Emolument from the United States, or any of them.

(8) Before he enter on the Execution of his Office, he shall take the following Oath or Affirmation:—"I do solemnly swear (or affirm) that I will faithfully execute the Office of President of the United States, and will to the best of my Ability, preserve, protect and defend "the Constitution of the United States."

## **Section 2.**

(1)The President shall be Commander in Chief of the Army and Navy of the United States, and of the Militia of the several States, when called into the actual Service of the United States, he may require the Opinion in writing, of the principal Officer in each of the executive Departments, upon any subject relating to the Duties of their respective Offices and he shall have Power to Grant Reprieves and Pardons for Offenses against the United States, except in Cases of Impeachment.

(2) He shall have Power, by and with the Advice and Consent of the Senate, to make Treaties, provided two-thirds of the Senators present concur; and he shall nominate, and by and with the Advice and Consent of the Senate, shall appoint

Ambassadors, other public Ministers, and Consuls, Judges of the supreme Court, and all other Officers of the United States, whose Appointments are not herein otherwise provided for, and which shall be established by Law: but the Congress may by Law vest the Appointment of such inferior Officers, as they think proper, in the President alone, in the Courts of Law, or in the Heads of Departments.

(3) The President shall have Power to fill up all Vacancies that may happen during the Recess of the Senate, by granting Commissions which shall expire at the End of their next Session.

### **Section 3.**

He shall from time to time give to the Congress information of the State of the Union, and recommend to their Consideration such Measures as he shall judge necessary and expedient, he may, on extraordinary Occasions, convene both Houses, or either of them, and in Case of Disagreement between them, with Respect to the Time of Adjournment, he may adjourn them to such Time as he shall think proper; he shall receive Ambassadors and other public Ministers; he shall take Care that the Laws be faithfully executed, and shall Commission all the Officers of the United States.

### **Section 4.**

The President, Vice President and all civil Officers of the United States, shall be removed from Office on Impeachment for, and Conviction of, Treason, Bribery, or other high Crimes and Misdemeanors.

## **Article III**

### **Section 1.**

The judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the

Congress may from time to time ordain and establish. The Judges, both of the supreme and inferior Courts, shall hold their Offices during good Behavior, and shall, at stated Times, receive for their Services a Compensation which shall not be diminished during their Continuance in Office.

## **Section 2.**

(1) The Judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and Treaties made, or which shall be made, under their Authority, to all Cases affecting Ambassadors, other public Ministers and Consuls, to all Cases of admiralty and maritime Jurisdiction, to Controversies to which the United States shall be a Party, to Controversies between two or more States;(between a State and Citizens of another State);<sup>10</sup> between Citizens of different States, between Citizens of the same State claiming Lands under Grants of different States, and (between a State, or the Citizens thereof, and foreign States, Citizens or Subjects).<sup>11</sup>

(2) In all Cases affecting Ambassadors, other public Ministers and Consuls, and those in which a State shall be Party, the supreme Court shall have original Jurisdiction. In all the other Cases before mentioned, the supreme Court shall have appellate Jurisdiction, both as to Law and Fact, with such Exceptions, and under such Regulations as the Congress shall make.

(3) The trial of all Crimes, except in Cases of Impeachment, shall be by Jury, and such Trial shall be held in the State where the said Crimes shall have been committed: but when not committed within any State, the Trial shall be at such Place or Places as the Congress may by Law have directed.

## **Section 3.**

(1) Treason against the United States, shall consist only in levying War against them, or in adhering to their Enemies, giving them Aid and Comfort. No Person shall be convicted

of Treason unless on the Testimony of two Witnesses to the same overt Act, or on Confession in open Court.

(2) The Congress shall have power to declare the punishment of Treason, but no Attainder of Treason shall work Corruption of Blood, or Forfeiture except during the Life of the Person attained.

## **Article IV**

### **Section 1.**

Full Faith and Credit shall be given in each State to the public Acts, Records, and judicial Proceedings of every other State. And the Congress may by general Laws prescribe the Manner in which such Acts, Records, and Proceedings shall be proved and the Effect thereof.

### **Section 2.**

(1) The Citizens of each State shall be entitled to all Privileges and Immunities of Citizens in the several States.

(2) A Person charged in any State with Treason, Felony, or other Crime, who shall flee from justice, and be found in another State shall on demand of the executive Authority of the State from which he fled, be delivered up, to be removed to the State having jurisdiction of the Crime.

(3) No Person held to Service or Labor in one State, under the Laws thereof, escaping into another, shall, in Consequence of any Law or Regulation therein, be discharged from such Service or Labor, but shall be delivered up on Claim of the Party to whom such Service or Labour may be due.<sup>12</sup>

### **Section 3.**

(1) New States may be admitted by the Congress into this Union, but no new State shall be formed or erected within the jurisdiction of any other State, nor any State be formed by the junction of two or more States, or parts of States, without the Consent of the Legislatures of the States concerned as well as

of the Congress.

(2) The Congress shall have Power to dispose of and make all needful rules and Regulations respecting the Territory or other Property belonging to the United States, and nothing in this Constitution shall be so construed as to Prejudice any Claims of the United States, or any particular State.

#### **Section 4.**

The United States shall guarantee to every State in this Union a Republican Form of Government, and shall protect each of them against Invasion; and on Application of the Legislature, or of the Executive (when the Legislature cannot be convened) against domestic Violence.

#### **Article V**

The Congress, whenever two-thirds of both Houses shall deem it necessary, shall propose Amendments to this Constitution, or, on the Application of the Legislatures of two-thirds of the several States, shall call a Convention for proposing Amendments, which, in either Case, shall be valid to all Intents and Purposes, as part of this Constitution when ratified by the Legislatures of three-fourths of the several States, or by Conventions in three-fourths thereof, as the one or the other Mode of Ratification may be proposed by the Congress; Provided that no Amendment which may be made prior to Year One thousand eight hundred and eight shall in any Manner affect the first and fourth Clauses in the Ninth Section of the first Article, and that no State, without its Consent, shall be deprived of its equal Suffrage in the Senate.

#### **Article VI**

(1) All Debts contracted and Engagements entered into, before the Adoption of this Constitution, shall be as valid against the United States under this Constitution, as under the Confederation.



(2) This Constitution, and the Laws of the United States which shall be made in Pursuance thereof, and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land, and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

(3) The Senators and Representatives before mentioned and the Members of the several State Legislatures, and all executive and judicial Officers, both of the United States and of the several States shall be bound by Oath or Affirmation, to support this Constitution; but no religious Test shall ever be required as a Qualification to any Office or public Trust under the United States.

## Article VII

The Ratification of the conventions of nine States, shall be sufficient for the Establishment of this Constitution between the States so ratifying the Same.

DONE in Convention by the Unanimous Consent of the States present the Seventeenth Day of September in the Year of our Lord one thousand seven hundred and Eighty-seven and of the Independence of the United States of America the Twelfth. In Witness whereof We have hereunto subscribed our Names.

Articles in Addition to, and Amendment of, the Constitution of the United States of America, Proposed by Congress, and Ratified by the Legislatures of the Several States, Pursuant to the Fifth Article of the Original Constitution.

G. WASHINGTON  
President and deputy from Virginia

# **Amendments**

## **Article I** <sup>13</sup>

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof, or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

## **Article II**

A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.

## **Article III**

No Soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law.

## **Article IV**

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

## **Article V**

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces,

or in the Militia, when in actual service in time of War or public danger, nor shall any person be subject for the same offence to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

### **Article VI**

In all criminal prosecutions the accused shall enjoy the right to a speedy and public trial by an impartial jury of the State and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the Assistance of Counsel for his defense.

### **Article VII**

In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than according to the rules of the common law.

### **Article VIII**

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

### **Article IX**

The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

## Article X

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

## Article XI<sup>14</sup>

The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State.

## Article XII<sup>15</sup>

The Electors shall meet in their respective states and vote by ballot for President and Vice-President, one of whom, at least, shall not be an inhabitant of the same state with themselves, they shall name in their ballots the person voted for as President, and in distinct ballots the person voted for as Vice-President, and they shall make distinct lists of all persons voted for as President, and of all persons voted for as Vice-President, and of the number of votes for each, which lists they shall sign and certify, and transmit sealed to the seat of the government of the United States, directed to the President of the Senate; The President of the Senate shall, in presence of the Senate and House of Representatives, open all the certificates and the votes shall then be counted; The person having the greatest number of votes for President, shall be the President, if such number be a majority of the whole number of Electors appointed; and if no person have such majority, then from the persons having the highest numbers not exceeding three on the list of those voted for as President, the House of Representatives shall choose immediately, by ballot, the President. But in choosing the President, the votes shall be taken by states, the representation from each state having one vote, a quorum for this purpose shall consist of a member or

members from two-thirds of the states, and a majority of all the states shall be necessary to a choice. (And if the House of Representatives shall not choose a President whenever the right of choice shall devolve upon them, before the fourth day of March next following then the Vice-President shall act as President, as in the case of the death or other constitutional disability of the President)<sup>16</sup> The person having the greatest number of votes as Vice-President, shall be the Vice-President, if such number be a majority of the whole number of Electors appointed, and if no person have a majority, then from the two highest numbers on the list, the Senate shall consist of two-thirds of the whole number of Senators, and a majority of the whole number shall be necessary to a choice. But no person constitutionally ineligible to the office of President shall be eligible to that of Vice-President of the United States.

### **Article XIII<sup>17</sup>**

#### **Section 1.**

Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction.

#### **Section 2.**

Congress shall have power to enforce the article by appropriate legislation.

### **Article XIV<sup>18</sup>**

#### **Section 1.**

All persons born or naturalized in the United States and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States, nor shall any state

deprive any person of life, liberty, or property, without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws.

## **Section 2.**

Representatives shall be apportioned among the several States according to their respective numbers, counting the whole number of persons in each State, excluding Indians not taxed. But when the right to vote at any election for the choice of electors for President and Vice-President of the United States, Representatives in Congress, the Executive and Judicial officers of a State, or the members of the Legislature thereof, is denied to any of the male inhabitants of such State, being twenty-one years of age, and citizens of the United States or in any way abridged, except for participation in rebellion, or other crime, the basis of representation therein shall be reduced in the proportion which the number of such male citizens shall bear to the whole number of male citizens twenty-one years of age in such State.

## **Section 3.**

No person shall be a Senator or Representative in Congress, or elector of President and Vice-President, or hold any office, civil or military, under the United States, or under any State, who, having previously taken an oath, as a member of Congress, or as an officer of the United States, or as a member of any State Legislature, or as an executive or judicial officer of any State, to support the Constitution of the United States, shall have engaged in insurrection or rebellion against the same, or given aid or comfort to the enemies thereof. But Congress may by a vote of two-thirds of each House, remove such disability.

## **Section 4.**

The validity of the public debt of the United States, authorized by law, including debts incurred for payment of

pensions and bounties for services in suppressing insurrection or rebellion, shall not be questioned. But neither the United States nor any State shall assume or pay any debt or obligation incurred in aid of insurrection or rebellion against the United States, or any claim for the loss or emancipation of any slave, but all such debts, obligations and claims shall be held illegal and void.

### **Section 5.**

The Congress shall have power to enforce, by appropriate legislation, the provisions of this article.

## **Article XV<sup>19</sup>**

### **Section 1.**

The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude.

### **Section 2.**

The Congress shall have power to enforce this article by appropriate legislation.

## **Article XVI<sup>20</sup>**

The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration.

## **Article XVII<sup>21</sup>**

The Senate of the United States shall be composed of two Senators from each State, elected by the people thereof, for six years; and each Senator shall have one vote. The electors of each State shall have the qualifications requisite for electors of the most numerous branch of the State legislatures. When vacancies happen in the representation of any State in

the Senate, the executive authority of such State shall issue writs of election to fill such vacancies. Provided, that the legislature of any State may empower the executive thereof to make temporary appointments until the people fill the vacancies by election as the legislature may direct.

This amendment shall not be construed as to affect the election or term of any Senator chosen before it becomes valid as part of the Constitution.

## **Article XVIII<sup>22</sup>**

### **Section 1.**

After one year from the ratification of this article the manufacture, sale, or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from the United States and all territory subject to the jurisdiction thereof for beverage purposes is hereby prohibited.

### **Section 2.**

The Congress and the several States shall have concurrent power to enforce this article by appropriate legislation.

### **Section 3.**

This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of the several States, as provided in the constitution, within seven years from the date of the submission hereof to the State by the Congress.

## **Article XIX<sup>23</sup>**

The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex.

Congress shall have power to enforce this article by appropriate legislation.



**Section 1.**

The terms of the president and Vice-President shall end at noon on the 20th day of January, and the terms of Senators and Representatives at noon on the 3d day of January, of the years in which such terms would have ended if this article had not been ratified; and the terms of their successors shall then begin.

**Section 2.**

The Congress shall assemble at least once in every year, and such meeting shall begin at noon on the 3d day of January, unless they shall by law appoint a different day.

**Section 3.**

If, at the time fixed for the beginning of the term of the President, the president elect shall have died, the Vice-President elect shall become President. If a President shall not have been chosen before the time fixed for the beginning of his term, or if the President elect shall have failed to qualify, then the Vice-President elect shall act as President until a President shall have qualified; and the Congress may by law provide for the case wherein neither a President elect nor a Vice-President elect shall have qualified, declaring who shall then act as President, or the manner in which one who is to act shall be selected, and such person shall act accordingly until a President or Vice-President shall have qualified.

**Section 4.**

The Congress may by law provide for the case of the death of any of the persons from whom the House of Representatives may choose a President whenever the right of choice shall have devolved upon them, and for the case of the death of any of the persons from whom the Senate may choose a Vice-President whenever the right of choice shall have devolved upon them.

### **Section 5.**

Sections 1 and 2 shall take effect on the 15th day of October following the ratification of this article.

### **Section 6.**

This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of three-fourths of the several States within seven years from the date of its submission.

## **Article XXI<sup>25</sup>**

### **Section 1.**

The eighteenth article of amendment to the Constitution of the United States is hereby repealed

### **Section 2.**

The transportation or importation into any State, Territory, or possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited.

### **Section 3.**

This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution within seven years from the date of the submission hereof to the States by the Congress.

## **Article XXII<sup>26</sup>**

### **Section 1.**

No person shall be elected to the office of the President more than twice, and no person who has held the office of President, or acted as President, for more than two years of a term to which some other person was elected President shall be elected to the office of the President more than once. But this Article shall not apply to any person holding the office of President when the Article was proposed by the Congress, and shall not

prevent any person who may be holding the office of President, or acting as President, during the term within which this Article becomes operative from holding the office of President or acting as President during the remainder of such term.

## **Section 2.**

This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of three-fourths of the several States within seven years from the date of its submission to the States by the Congress.

## **Article XXIII<sup>27</sup>**

### **Section 1.**

The District constituting the seat of Government of the United States shall appoint in such manner as the Congress may direct: A number of electors of President and Vice-President equal to the whole number of Senators and Representatives in Congress to which the District would be entitled if it were a State, but in no event more than the least populous State they shall in addition to those appointed by the States, but they shall be considered, for the purposes of the election, of President and Vice-President, to be electors appointed by a State, and they shall meet in the District and perform such duties as provided by the twelfth article of amendment.

### **Section 2**

The Congress shall have power to enforce this article by appropriate legislation.

## **Article XXIV<sup>28</sup>**

### **Section 1.**

The right of citizens of the United States to vote in any primary or other election for President or Vice-President, for electors for President or Vice-President, or for Senator or

Representative in Congress, shall not be denied or abridged by the United States or any state by reasons of failure to pay any poll tax or other tax.

## **Section 2.**

The Congress shall have power to enforce this article by appropriate legislation.

## **Article XXV<sup>29</sup>**

### **Section 1.**

In case of the removal of the President from office or of his death or resignation, the Vice-President shall become President.

### **Section 2.**

Whenever there is a vacancy in the office of the Vice-President, the President shall nominate a Vice-President who shall take office upon confirmation by a majority vote of both Houses of Congress.

### **Section 3.**

Whenever the President transmits to the President pro tempore of the Senate and the Speaker of the House of Representatives his written declaration that he is unable to discharge the powers and duties of his office, and until he transmits to them a written declaration to the contrary, such powers and duties shall be discharged by the Vice-President as Acting President.

### **Section 4.**

Whenever the Vice-President and a majority of either the principal officers of the Executive departments or of such otherbody as Congress may by law provide transmit to the President pro tempore of the Senate and the Speaker of the House of Representatives their written declaration that the President is unable to discharge the powers and duties of his office, the Vice-President shall immediately assume the powers and duties of the office as Acting President.

Thereafter, when the President transmits to the President pro tempore of the Senate and the Speaker of the House of Representatives his written declaration that no inability exists, he shall resume the powers and duties of his office unless the Vice-President and a majority of either the principal officers of the Executive departments or of such other body as Congress may by law provide transmit within four days to the President pro tempore of the Senate and the Speaker of the House of Representatives their written declaration that the President is unable to discharge the powers and duties of his office. Thereupon Congress shall decide the issue, assembling within forty-eight hours for that purpose if not in session. If the Congress, within twenty-one days after receipt of the latter written declaration, or, if Congress is not in session, within twenty-one days after Congress is required to assemble, determines by two-thirds vote of both houses that the President is unable to discharge the powers and duties of his office, the Vice-President shall continue to discharge the same as Acting President; otherwise, the President, shall resume the powers and duties of his office.

### **Article XXVI<sup>30</sup>**

#### **Section 1.**

The right of citizens of the United States, who are 18 years of age or older, to vote shall not be denied or abridged by the United States or any state on account of age.

#### **Section 2.**

The Congress shall have power to enforce this article by appropriate legislation.

### **Article XXVII<sup>31</sup>**

No law, varying the compensation for the services of the Senators and Representatives, shall take effect, until an election of Representatives shall have intervened.

## Footnotes

- <sup>1</sup> Numbers to paragraphs in each section have been added by the text authors.
- <sup>2</sup> The Sixteenth Amendment replaced this with respect to income taxes. Bracketed text has been modified by amendments.
- <sup>3</sup> Repealed by the Fourteenth Amendment.
- <sup>4</sup> Repealed by the Seventeenth Amendment, Section 1.
- <sup>5</sup> Changed by the Seventeenth Amendment, Section 2.
- <sup>6</sup> Changed by the Twentieth Amendment, Section 2.
- <sup>7</sup> Changed by the Sixteenth Amendment.
- <sup>8</sup> This paragraph was superseded in 1804 by the Twelfth Amendment.
- <sup>9</sup> See the Twenty-Fifth Amendment.
- <sup>10</sup> Restricted by the Eleventh Amendment.
- <sup>11</sup> Restricted by the Eleventh Amendment.
- <sup>12</sup> This paragraph has been superseded by the Thirteenth Amendment.
- <sup>13</sup> The first 10 amendments were adopted in 1791.
- <sup>14</sup> Adopted in 1798.
- <sup>15</sup> Adopted in 1804.
- <sup>16</sup> Superseded by the Twentieth Amendment, Section 3.
- <sup>17</sup> Adopted in 1865.
- <sup>18</sup> Adopted in 1868.
- <sup>19</sup> Adopted in 1870.
- <sup>20</sup> Adopted in 1913.
- <sup>21</sup> Adopted in 1913.
- <sup>22</sup> Adopted in 1919, repealed by Section 1 of the Twenty-first Amendment.
- <sup>23</sup> Adopted in 1920.
- <sup>24</sup> Adopted in 1933.
- <sup>25</sup> Adopted in 1933.
- <sup>26</sup> Adopted in 1951.
- <sup>27</sup> Adopted in 1961.
- <sup>28</sup> Adopted in 1964.
- <sup>29</sup> Adopted in 1967.
- <sup>30</sup> Adopted in 1971.
- <sup>31</sup> Adopted in 1992.

## Oath of Allegiance to The United States

I (state your full name) having been appointed an Air Force Cadet, United States Air Force, do solemnly swear (or affirm) that I will support and defend the Constitution of the United States against all enemies, foreign and domestic, that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose of evasion, and that I will well and faithfully discharge the duties of the office on which I am about to enter.

SO HELP ME GOD.

**REF:** *Air Force Officer's Guide, pg1, 30th edition. By Lt Col John Hawkins Napier III, USAF (Ret). Stackpole books, Mechanicsburg, PA 17055.*

# The Coming American

by Sam Walter Foss

Bring me men to match my mountains;  
Bring me men to match my plains,  
Men with empires in their purpose,  
And new eras in their brains.  
Bring me men to match my prairies,  
Men to match my inland seas,  
Men whose thought shall pave a highway  
Up to ampler destinies;  
Pioneers to clear Thought's marshlands,  
And to cleanse old Error's fen;  
Bring me men to match my mountains  
Bring me men!

Bring me men to match my forests,  
Strong to fight the storm and blast,  
Branching toward the skyey future,  
Rooted in the fertile past.  
Bring me men to match my valleys,  
Tollerant of sun and snow,  
Men within whose fruitful purpose  
Time's consummate blooms shall grow.  
Men to tame the tigerish instincts  
Of the lair and cave and den,  
Cleanse the dragon slime of Nature  
Bring me men!



Bring me men to match my rivers,  
Continent cleavers, flowing free,  
Drawn by the eternal madness  
To be mingled with the sea;  
Men of oceanic impulse,  
Men whose moral currents sweep  
Toward the wide-infolding ocean  
Of an undiscovered deep;  
Men who feel the strong pulsation  
Of the Central Sea, and then  
Time their currents to its earth throb  
Bring me men!

**REF:** *Whiffs from Wild Meadows* by Samuel Walter Foss, pp 253-261.  
Lothrop, Lee & Shepard Co., Boston, MA 1985.



# The Star Spangled Banner

by Francis Scott Key, 1814

## I

O say can you see, by the dawn's early light  
What so proudly we hail'd at the twilight's last gleaming?  
Whose broad stripes and bright stars, thro' the perilous fight,  
O'er the ramparts we watched, were so gallantly streaming?  
And the rockets' red glare, the bombs bursting in air,  
Gave proof thro' the night that our flag was still there  
O say, does that star spangled banner yet wave  
O'er the land of the free and the home of the brave?

## II

On the shore, dimly seen thro' the mists of the deep,  
Where the foe's haughty host in dread silence  
responses,  
What is that which the breeze, o'er the towering steep,  
As it fitfully blows, half conceals, half discloses?  
Now it catches the gleam of the morning's first beam,  
In full glory reflected, now shines on the steam:  
'Tis the star spangled banner: O long may it wave  
O'er the land of the free and the home of the brave!

### III

And where is that band who so vauntingly swore  
That the havoc of war and the battle's confusion,  
A home and a country should leave us no more?  
Their blood has wash'd out their foul footsteps' pollution.  
No refuge could save the hireling and slave  
From the terror of flight or the gloom of the grave:  
And the star spangled banner in triumph doth wave  
O'er the land of the free and the home of the brave!

### IV

O thus be it ever when free men shall stand  
Between their lov'd homes and the war's desolation;  
Blest with vict'ry and peace, may the heav'n- rescued land  
Praise the pow'r that hath made and preserv'd us a nation!  
Then conquer we must when our cause it is just,  
And this be our motto: "In God is our trust!"  
And the star spangled banner in triumph shall wave  
O'er the land of the free and the home of the brave!

**REF:** *National Anthems of the World*. Editors: T.M. Cartlege, Henry Coleman, and Martin Shaw, Arco Publishing, N.Y., 1975. pp 429-431.

# THE CIVILIAN CHAIN OF COMMAND

The Civilian Chain of Command is organized in accordance with the Constitution of the United States. The head of the military is the President of the United States followed by the Secretary of Defense, and the Secretary of the Air Force. The significance of having the civilian Chain of Command is that the American people are solely in charge of the government and that the military is subservient to the American government.

## THE MILITARY'S ROLE IN US GOVERNMENT

The military's role in the government of the United States is to advise the civilian chain of command on matters concerning the military, especially during times of crisis or war, and to loyally follow the orders given by the civilian government. When the United States is forced to deal with a country whose goals or actions are hostile to those of the United States, we respond to that country by using the four instruments of national power—political, economic, informational, and military.

The political or diplomatic instrument of national power involves extensive negotiation between the diplomats of the countries involved, and it often includes the threat of economic or military action if the negotiations fail. The goal of this instrument is to persuade an adversary to accept our point of view without using force and is usually very effective. In some cases, however, the United States must use the other instruments of national power.

The economic instrument of national power involves imposing sanctions against a country or withholding economic or military aid from a country. The expectation is that, after a period of time, the target country will accede to our government's wishes in hopes of gaining relief from economic hardships being imposed on them.

The informational instrument of national power uses informational means to persuade and influence public opinion. In order for the United States to carry out actions against another

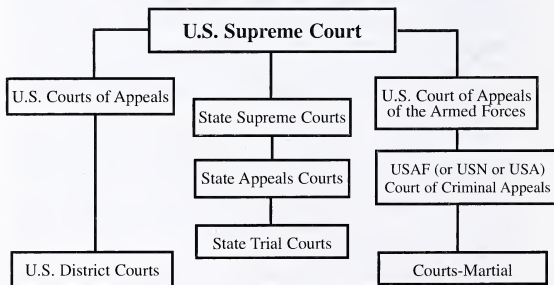
nation, it must first have the support of the American people and often its allies. This is most effectively accomplished through using the media to create and maintain this essential support, as well as leading and conducting international conferences.

Usually if these other instruments of national power are not successful in achieving national objectives, the final instrument of national power, military action, is implemented. Although there have been numerous wars involving the United States, the other instruments of national power are often very effective in solving conflicts. However, since many other countries resort to military action, the United States must always be prepared to respond militarily to defend our national interests whenever necessary.

### **Documentation:**

Schlagheck, J.S., and J.M. Smith., ed. *Introduction to Joint and Multinational Operations*. New York, NY: American Heritage Custom Publishing, 1997. Pgs. 49-51

Captain T.J. Traub, 34 EDG, edited and revised this article.



# MILITARY JUDICIAL SYSTEM

The United States Military System, formally known as the Uniform Code of Military Justice (UCMJ), is the military's equivalent to state and federal judicial systems. Like the military chain of command, the military judicial system is ultimately under the authority of civilian control. All military courts are subject and subservient to the authority of the U.S. Supreme Court.

There are some important differences between military courts and civilian courts. First off, the UCMJ applies to all active duty personnel, whether crimes committed were directly related to military service or not. Second, the court-martial system begins when charges are preferred against someone, usually by the person's commander. It is the military commander who decides whether judicial action is appropriate. Options for military commanders include General Court-Martial (GCM), Special Court-Martial (SPCM), and Summary Court-Martial. In a court-martial, only two-thirds vote of the court-martial members is needed for conviction of an accused; otherwise, the accused is acquitted. Punishments can include forfeitures of pay, confinement and restrictions, and a punitive discharge from the service. Special and summary court-martials can only inflict punishments of less severity than a GCM.

It is important to remember as officer-candidates and active duty military personnel that the UCMJ applies 24 hours a day, 7 days a week. Certain actions violate the UCMJ, such as insubordination, which normally are not considered unlawful in civilian judicial systems. The purpose of the UCMJ is to hold military members to the minimum expectations our nation desires of its servicemen. As commanders, it is essential to understand the UCMJ and how it applies to the commander and his subordinates.

## **Documentation:**

Murphy, T.W., and Tolan, P.E. Law for Air Force Officers. Dubuque, IA: Kendall/Hunt Publishing Co., 1997. Figure 3-1, Chapter 4.

Captain Douglas M. Flinn, JAG, USAF, proofread the article and made corrections for better clarification.

## **THE ROLE OF THE PRESIDENT AND CONGRESS IN THE MILITARY**

The President and Congress both play an important part in the military. While the President is the Commander-in-Chief and makes the final decisions, Congress has specific powers of its own as well as some power to influence the decisions that the President makes.

The President is usually the biggest contributor to defense department policy and the defense budget. On the other hand, Congress has control over the purse and decides whether or not to spend the money that the President requests. The President may articulate a defense program, but it must meet approval by Congress in order to be implemented.

Congress also has certain powers which the executive branch does not have. The power to declare war is solely possessed by Congress. In addition, Congress has the power to raise forces—Army, Navy, Marines, Coast Guard, and Air Force—to carry out the declaration of war.

## **THE NATIONAL SECURITY AGENCY**

The National Security Agency, located in Fort George G. Meade, Maryland and founded in 1947, is a branch under the Department of Defense responsible for handling information concerning the national security of the United States. The main responsibility of this agency is to maintain government secrecy concerning national security information and counterintelligence activities.



## **THE DEFENSE INTELLIGENCE AGENCY**

The Defense Intelligence Agency is a contract group which specializes in obtaining information for the military. They are involved in all aspects of the military including gathering information on terrorists groups and checking backgrounds of personnel requesting security clearances. They report directly to the Chairman of the Joint Chiefs of Staff.

## **THE DEPARTMENT/SECRETARY OF DEFENSE**

The Department of Defense (DoD) is headed by the Secretary of Defense and made up of the Joint Chiefs of Staff, the Combatant Commands, the DoD Staff, the Military Departments, the DoD agencies, and DoD Field Activities. The DoD was created by the National Security Act of 1947 to maintain and employ the armed forces to support and defend the Constitution of the United States, to provide national security, and to protect national policies and interests.

The National Security Act of 1947 also created the position of the Secretary of Defense (SECDEF), who's role is principal assistant to the President for all matters relating to the Department of Defense. He has undisputed authority and control over the DoD, and in time of war military orders flow directly from the President to the SECDEF, to the Combatant Commands. If the President desires, those orders may flow through the Chairman of the Joint Chiefs of Staff on the way to the Combatant Command CINCs.

The Chairman of the Joint Chiefs of Staff is the principal military advisor to the President. Although he transmits communications to the combatant commands, he does not exercise military command over any combatant forces. The

Chiefs of Staff of each military service are responsible to their respective Secretaries for the management (organize, train, and equip) of the services. Each Chief of Staff serves in that capacity for a period of four years.

## THE UNITED NATIONS

The United Nations (UN) is an international organization of nation-states. It was established “to maintain international peace and security, to develop friendly relations among nations; and to achieve international cooperation in solving economic, social, cultural, or humanitarian [problems]” and to “encourage respect for human rights and for fundamental freedoms.” The United Nations replaced the League of Nations as the international peacekeeping organization with the signing of its charter on 26 June 1945 in San Francisco. There were 51 members that signed the original charter. Currently there are 185 members. New members are accepted with 2/3 of the General Assembly approval. On 10 December 1945, the United States invited the United Nations to place their headquarters in New York. Lake Success, New York was the original site; however, later that year land was purchased bordering the East River in Manhattan. The UN follows the guidelines established by the UN Charter. Under this charter, it is established “that states are equal under international law; that states have full sovereignty over their own affairs; that states should have full independence and territorial integrity; and that states should carry out their international obligations.” The charter also established six principal UN organizations: the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the Secretariat. The

United Nations Peacekeeping Forces have been involved in Korea, the Suez Canal, the Gulf War, Congo, Bosnia, and most recently Kosovo. The United Nations is not a world government, but rather “an instrument through which nations can cooperate to solve their mutual problems.”

“The story of America is the story of common men who, whatever their motives, whatever their goals, were inspired to uncommon levels of accomplishment. Just as many drops of water can join to make a waterfall, increments of human accomplishment, small perhaps for any individual will, when multiplied by millions, create a nation whose stature is second to none. This is America: these her uncommon men.”

**-Crawford Greenewalt  
“The Uncommon Man”**

## Military Section



## **The 3 Levels of Warfare**

(From Air Force Doctrine Document 1, September 1997)

**Strategic** - *The level of war at which a nation or group of nations determines national or alliance security objectives and develops and uses national resources to accomplish those objectives.*

**Operational** - *The level of war at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theaters or areas of operations.*

**Tactical** - *The level of war at which battles and engagements are planned and executed to accomplish military objectives assigned to tactical units or task forces.*

## **The 9 Principles of War**

(From Air Force Doctrine Document 1, September 1997)

1. **Objective** - *Direct military operations toward a defined and attainable objective that contributes to strategic, operational, or tactical aims.*

2. **Offensive** - *Act rather than react and dictate the time, place, purpose, scope, intensity, and pace of operations. The initiative must be seized, retained, and fully exploited.*

3. **Mass** - *Concentrate combat power at the decisive time and place.*

4. **Economy of Force** - *Create usable mass by using minimum combat power on secondary objectives. Make fullest use of all forces available.*

5. **Maneuver** - *Place the enemy in a position of disadvantage through the flexible application of combat power.*

6. **Unity of Command** - *Ensure unity of effort for every objective under one responsible commander.*

7. **Security** - *Protect friendly forces and their operations from enemy actions which could provide the enemy with unexpected advantage.*

8. **Surprise** - *Strike the enemy at a time or place or in a manner for which he is unprepared.*

9. **Simplicity** - *Avoid unnecessary complexity in preparing, planning, and conducting military operations.*

## **Code of the United States Fighting Force**

As a member of the Armed Forces of the United States, you are protecting your nation. It is your duty to oppose all enemies of the United States in combat or, if a captive, in a prisoner of war compound. Your behavior is guided by the Code of Conduct, which has evolved from the heroic lives, experiences, and deeds of Americans from the Revolutionary War to the Gulf War. Your courage, dedication, and motivation supported by understanding, trust, and fidelity will help you endure the terrors of captivity, prevail over your captors, and return to your family, home, and nation with pride and honor.

# **Code of Conduct for Members of the Armed Forces of the United States**

## **I**

I am an American, fighting in the forces which guard my country and our way of life. I am prepared to give my life in their defense.

## **II**

I will never surrender of my own free will. If in command, I will never surrender the members of my command while they still have the means to resist.

## **III**

If I am captured, I will continue to resist by all means available. I will make every effort to escape and to aid others to escape. I will accept neither parole nor special favors from the enemy.

## **IV**

If I become a prisoner of war, I will keep faith with my fellow prisoners. I will give no information nor take part in any action which might be harmful to my comrades. If I am senior, I will take command. If not I will obey the lawful orders of those appointed over me and will back them up in every way.



When questioned, should I become a prisoner of war, I am required to give name, rank, service number, and date of birth. I will evade answering further questions to the utmost of my ability, I will make no oral or written statements disloyal to my country and its allies or harmful to their cause.

## VI

I will never forget that I am an American, fighting for freedom, responsible for my actions, and dedicated to the principles which made my country free. I will trust in my God and in the United States of America.

## **The Uniform of My Country**

**by Captain Karen Dorman Kimmel**

Over two hundred years ago the first thread of the uniform I wear was woven. While great men dreamed of a country of free people, the army and navy that would win her liberty had already begun to organize. As the fledgling country grew stronger, so did its uniform develop. Each button and ribbon that has been added through the years boasts of victory at sea, conquests on land, and some of military aviation's greatest successes. The added medals and insignia laud moments of heroism known to us all. I wear the uniform of my country because, as America is a blend of races and cultures, my uniform is a woven, visual history of her people's courage, determination, and unique love of freedom.

Without a word this uniform also whispers of freezing troops, injured bodies, and Americans left forever in foreign fields. It documents every serviceman's courage, who by accepting this uniform, promises the one gift he truly has to give: his life. I wear my uniform for the heritage of sacrifice it represents and more.

No factor in America's growth has been greater than the men and women who have worn her uniform to help keep her strong. In war and in peace, they have circled the earth and journeyed to the moon, always carrying America's ideals with them. Their service to her has been a legend of honor.

I wear my uniform with pride, for it represents the greatest nation of free people in the world. America serves as an example for those who strive to be free. They recognize this uniform as standing for millions of Americans who respect their world neighbors and wish to live in peace with them. My uniform is an extension of my people and my nation.

Most importantly, I wear the uniform of my country because others do not. America's freedom is a right given by God, but

defended by man. It is our overwhelming responsibility to preserve our heritage of freedom for all Americans, and I accept that challenge willingly.

I wear the uniform of my country because of its history, its heritage of honor, its service to America, its representation of my people, and because of my desire to live in a free land. Hopefully, I wear this uniform in peace. But America's enemies must know that I will also stand fearlessly in war as those before me have stood.

I pray only that I do not stand alone.



## United States Unified Commands

The United States military has nine Unified Commands. The "Unified" in the title refers to the multi-service or "Joint" nature of these commands, in which, command of forces from all branches of the armed services is "unified" by one Commander-in-Chief (CINC) charged with carrying out the command's mission. All nine CINCs are either a four-star Army, Marine or Air Force general or Navy admiral. There are five CINCs with Geographic Areas of Responsibility. They are:

- U.S. Atlantic Command (USACOM), Norfolk, VA.
- U.S. Pacific Command (USPACOM), Camp H.M. Smith, HI.
- U.S. European Command (USEUCOM), Stuttgart-Vaihingen, Germany.
- U.S. Central Command (USCENTCOM), MacDill AFB, FL.
- U.S. Southern Command (USSOUTHCOM), MacDill AFB, FL.

These CINCs are responsible for conducting all military operations within their assigned geographic region. For example, military operations in the Persian Gulf region, such as the recent Operation Desert Thunder, are the responsibility of the CINC, U.S. Central Command, because that region is part of his assigned geographic area of responsibility.

CINCs with Geographic Areas of Responsibility are the highest-ranking military officers in the Chain of Command for the conduct of military operations and report directly to the National Command Authority, which consists of the Secretary of Defense and the President of the United States.

There are four other Unified Commands with responsibilities that are functional, not geographic, in nature. For example, U.S. Transportation Command is responsible for the large-scale movement of military equipment, supplies and personnel throughout the world using logistics aircraft and ships. The function-oriented CINCs are:

- U.S. Transportation Command, (USTRANSCOM), Scott AFB, IL.
- U.S. Space Command (USSPACECOM), Peterson AFB, CO.
- U.S. Strategic Command (USSTRATCOM), Offutt AFB, NE.
- U.S. Special Operations Command (USSOCOM), MacDill AFB, FL.





## **ONE MORE ROLL**

*by Commander Gerald Coffee, Hanoi, 1968*

We toast our faithful comrades  
Now fallen from the sky  
And gently caught by God's own hand  
To be with Him on high.

To dwell among the soaring clouds  
They knew so well before  
From dawn patrol and victory roll  
At heaven's very door.

And as we fly among them there  
We're sure to hear their plea  
"Take care, my friend; watch your six  
And do one more roll . . . just for me."

## Gallery of Air and Space Power Leaders

### *Major General Benjamin D. Foulois*

was born in 1879 in Connecticut. He enlisted in the Army in the 1st U.S. Volunteer Engineers. He was one of the earliest pioneers of air power and left his mark on American military aviation. Because of his “coolness in combat and leadership” he was commissioned as a second lieutenant and served as the Army’s first one-man air force. He was first connected with the Army’s first real flying experience as a member of the Aeronautic Board from 1908-1909, in which he convinced the Army to buy the Wright aircraft and contract the inventors. Foulois showed that the aircraft had military capabilities such as aerial mapping, photography, and observation of ground troops. He was the Army’s first aeronautical member who began to realize the military capabilities of aircraft during warlike conditions. Like airpower theorists after him, Foulois experienced skepticism and doubt from top military policy makers like the House Committee on Military Affairs. He firmly believed that the War Department failed to comprehend the value of aviation as a new weapon and therefore had no right to claim control over aviation in the United States. Foulois retired as a Major General and former Chief of the Army Air Corps.

### *Italian General Giulio Douhet*

was an air power theorist who visualized key concepts of the air power doctrine that are still used today—published in his *Command of the Air* in 1921. He wrote *Command of the Air* in 1911-1915. Douhet recognized the significant impact of air power in future warfare and concentrated on strategic doctrine rather than tactical doctrine. Douhet’s strategic doctrine included striking the enemy first without any formal declaration of war by employing mass bombers. He failed to see the importance of fighter aircraft as a means of interdiction and positioned them as escorts for the bombers. Although not all of Douhet’s ideas are used today, he did realize the essential role of air power and advocated an independent air force from naval and army forces. “Command of the air must be achieved in order to win future wars.”

### ***General Curtis E. LeMay***

started his career as a cadet in the Army Air Corps flying school in 1928. On 12 May 1938 LeMay led three B-17's on a mission to intercept the Italian liner *Rex*. With this success LeMay confirmed that air power had the potential for defending our nation from sea attack as well as affirming the navigational capabilities of long-range bombers. Over the years LeMay earned the reputation as an extraordinary pilot and navigator. "We will always need manned systems—manned planes, manned spacecraft. Missiles are spectacular and they play their role, but they have no sense of loyalty; they can't think; they can't be recalled." LeMay continued to lead by example and became Commander of the 20th Bomber Command and the Commander of the Air Forces in Europe. He was Chief of Staff from 1961 to 1965.

### ***General James H. "Jimmy" Doolittle***

enlisted in the Army Signal Corps Reserve in October 1917 as a flying cadet. Doolittle resigned from the Army Air Corp in 1930, but ten years later in July 1940 he returned to active duty. In April of 1942, he led 16 B-25 medium bombers on the first American bombing attack against the homeland of Japan from the deck of the USS *Hornet*. As a result of this bombing run on Tokyo, he received the Medal of Honor. In his career he was the commander of the Twelfth Air Force in North Africa, the Fifteenth Air Force in Italy, and the Eighth Air Force in England. Doolittle advocated the creation of an independent Air Force. "The first lesson is that you cannot lose a war if you have command of the air and you cannot win a war if you haven't." Doolittle, nicknamed the "Renaissance Man of Aviation", was a testpilot as well as a daredevil and risk taker who made deliberate decisions. He always gave credit towards others and strived for perfection. Doolittle died in California on 27 September 1993.

### ***Brigadier General William "Billy" Mitchell***

was a prominent crusader for air power. His career started when he became a second lieutenant in the volunteer signal company. Mitchell became the driving force for advocating the strength and power that aeronautics would play in the future as an equal partner to the Army and



Navy. He proposed that the Department of Aeronautics should be in charge of the training and personnel used by the other services. Mitchell proposed that the airplane was superior to the battleship, which he tried to demonstrate by sinking the *Ostfriesland* on 22 July 1921. In many ways his ideas and methods sparked controversy and disapproval, which led to his court-martial. Mitchell attempted to gain support with his first book, *Our Air Force*. Mitchell contributed to the doctrinal and tactical growth of the Air Service despite the opposition that he struggled against.

### ***General Carl A. "Tooey" Spaatz***

graduated from West Point in 1914. He began flight training in 1915 at Rockwell Field, San Diego. "Tooey" was a man of few words but always in control. He had a natural feeling for flight training and soloed after just 50 minutes of his first flight training. He brought public attention to the Army Air Service as commander of the Far West Flying Circus putting on stunting and dogfighting exhibitions. On 27 March 1948 General Carl Spaatz became the first Chief of Staff of the Air Force. Spaatz, like Eaker, realized the importance of a separate Air Force. He was a dedicated man who served his country with extreme loyalty. His commands included Commander of the Eighth Air Force, Commander of the North African Air Force, and Commander of USSTAF, U.S. Strategic Air Forces in Europe. Spaatz was part of the Question Mark crew that flew for 150 hours, 40 minutes, and 15 seconds on 7 January 1929.

### ***General Ira C. Eaker***

began his flying career in 1917, the same year he was commissioned as a second lieutenant in the infantry. Eaker understood the necessity of popular support in order for air power to be established once the U.S. began arming for the war in Europe in 1938. Eaker was a primary U.S. air service representative establishing the British–U.S. combined bomber offensive of WWII, and he led bombing raids on German-occupied Europe as commander of the Eighth Air Force. General Eaker died on 6 August 1987.

### *General Bernard A. Schriever*

was what many consider to be the Founding Father of the US Space program. He followed the Army Air Corps to what is now the US Air Force. Schriever is credited for overcoming the technical challenges that presented themselves during the development of the ICBM. His tremendous effort to get the missiles developed and deployed, especially in the light of the space race that began as a result of his efforts, directly affected America's ability to compete for control of space. His tremendous achievements were reflected and rewarded by the redesignation of Falcon AFB in Colorado Springs to Schriever Air Force Base. General Schriever's contributions have, and will continue to make, a lasting impression on the United States Air Force.

## **United States Military Decorations**

The MEDAL OF HONOR is the highest award the United States can offer a member of her Armed Forces. It was authorized by an Act of Congress for the Navy in 1861 and the Army in 1862. It is awarded to those individuals who demonstrate exceptional gallantry and courage beyond the call of duty. The act of bravery must have occurred in actual combat against an enemy of the United States and must have involved conspicuous risk of life. The degree of risk must have been such that failure to commit the act would not have resulted in any censure. The MEDAL OF HONOR is awarded by an Act of Congress and is usually presented by the President of the United States.

The AIR FORCE CROSS, NAVY CROSS (USN AND USMC), and DISTINGUISHED SERVICE CROSS (USA) are awarded to United States and foreign military as well as civilian personnel for an act distinguished by heroism in connection with military operations against the enemy. Such heroism must have involved extraordinary risk of life.

The DEFENSE DISTINGUISHED SERVICE MEDAL is awarded to any military officer of the Armed Forces of the United States who is assigned to joint staffs and other joint activities of the DoD for exceptionally meritorious service to the United States in a position of unique and great responsibility, while serving with the joint staff or any other joint activities of the DoD.

The DISTINGUISHED SERVICE MEDAL is presented to any person (military, civilian, or foreign) who has

distinguished himself by the exceptional exercise of authority or judgment in duties which decide the successful outcome of a major military operation.

The SILVER STAR denotes any individual (military, civilian, or foreign) who exhibits gallantry in action against an enemy of the United States; gallantry being defined as a high degree of heroism.

The DEFENSE SUPERIOR SERVICE MEDAL is awarded to any United States Military personnel by the Secretary of Defense who is assigned to a joint staff or other joint activity of the DoD for rendering superior meritorious service in a position of significant responsibility.

The LEGION OF MERIT recognizes exceptionally meritorious conduct in the performance of outstanding service to the United States. The award itself consists of three levels or degrees which are awarded in accordance with the rank of the recipient. It is awarded without degree to members of the armed forces of the United States. To members of foreign armed forces it is awarded in four degrees: Chief Commander, Commander, Officer, and Legionnaire.

The DISTINGUISHED FLYING CROSS is awarded to a member of the armed forces of the United States or to a member of the armed forces of a foreign nation. It is awarded for an act in aerial flight which displays distinctive heroism involving operations that are not routine.

The AIRMAN'S MEDAL, NAVY-USMC MEDAL and SOLDIER'S MEDAL designate members of the armed forces who voluntarily and heroically risk their lives under conditions not involving conflict with an armed enemy.

The BRONZE STAR recognizes persons serving in the armed forces who distinguish themselves by heroism in surface combat against the enemy or by meritorious achievement in connection with military operations against an enemy.

The PURPLE HEART is presented to military or civilian citizens of the United States who are wounded or killed in action. The wound must have been received in battle and required medical treatment.

The DEFENSE MERITORIOUS SERVICE MEDAL is awarded by the Office of the Secretary of the Air Force, Washington Headquarters Services, Defense Agencies and Headquarters Unified and Specified Commands for noncombat meritorious service or achievement that is incontestably exceptional and of a magnitude that clearly places an individual above his or her peers.

The MERITORIOUS SERVICE MEDAL is awarded to United States military personnel for outstanding noncombat meritorious achievement or service to the United States.

The AIR MEDAL is awarded to United States and foreign military and civilian personnel for meritorious achievement while participating in aerial flight, or for sustained operations against an enemy of the United States.

The JOINT SERVICE, AIR FORCE AND ARMY COMMENDATION MEDALS recognize meritorious achievement or service on the part of a member of the armed forces. These medals are given primarily under peacetime conditions.

The AF ACHIEVEMENT MEDAL is awarded for outstanding achievement, meritorious service, this award is intended primarily for outstanding airmen and officers below the grade of colonel.

The PRESIDENTIAL UNIT CITATION designates units which have displayed great heroism in battle. This award corresponds to the Distinguished Service Cross but on the organizational instead of the individual level.

The AIR FORCE OUTSTANDING UNIT AWARD and the NAVY UNIT COMMENDATION are bestowed in recognition of outstanding unit achievement.

The AIR FORCE ORGANIZATIONAL EXCELLENCE AWARD is awarded to organizations of the United States Armed Forces who have distinguished themselves by exceptionally meritorious achievement or service in support of military operations. It is also awarded when the organization is involved in an event of great national or international significance when not in support of combat operations.

The GOOD CONDUCT MEDAL for all services is given to enlisted personnel for exemplary behavior, efficiency, and fidelity. It is the most widely awarded medal during peacetime.

The AF RECOGNITION RIBBON (not medal) is awarded to named individual Air Force Recipients of special trophies and awards.

## Devices

The bronze OAK LEAF CLUSTER (GOLD STAR, USN-USMC) designates a medal for which a second or subsequent award is made.

The silver OAK LEAF CLUSTER (SILVER STAR, USN-USMC) is equal to five bronze OAK LEAF CLUSTERS.

The bronze SERVICE STAR designates campaign participation credit and additional awards.

The silver SERVICE STAR equals five bronze service stars.

A bronze letter "V" device attached to a ribbon is awarded for valor in combat.

Detailed information on these and all other USAF awards and decorations can be found in AFM 900-3 and AFM 900-48.

# UNITED STATES MILITARY DECORATIONS



Medal of Honor



Air Force Cross



Silver Star



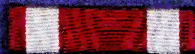
Defense Superior  
Service Medal



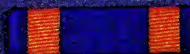
Airman's Medal



Bronze Star Medal



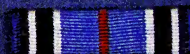
Meritorious Service  
Medal



Air Medal



Air Force Commendation  
Medal



Joint Service  
Achievement Medal



Joint Meritorious  
Unit Award



AF Outstanding  
Unit Award



Combat Readiness Medal



Air Force  
Good Conduct Medal



Outstanding Airman  
of the Year



Air Force  
Recognition Ribbon



# UNITED STATES MILITARY DECORATIONS



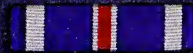
Defense Distinguished Service Medal



Distinguished Service Medal (AF)



Legion of Merit



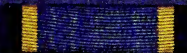
Distinguished Flying Cross



Purple Heart



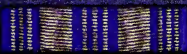
Defense Meritorious Service Medal



Aerial Achievement Medal



Joint Service Commendation Medal



Air Force Achievement Medal



Presidential Unit Citation



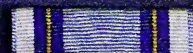
AF Organizational Excellence Award



Prisoner of War Medal



Good Conduct Medal



Air Reserve Forces Meritorious Service Medal



American Defense Service Medal



American Campaign Medal

# UNITED STATES MILITARY DECORATIONS



Asiatic-Pacific  
Campaign Medal



European-African-Middle  
Eastern Campaign Medal



Medal for Humane Action



National Defense  
Service Medal



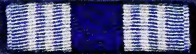
Armed Forces  
Expeditionary Medal



Vietnam Service Medal



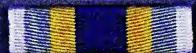
Air Force Overseas  
Ribbon-Short



Air Force Overseas  
Ribbon-Long



USAF NCO PME  
Graduate Ribbon



Basic Military Training  
Honor Graduate



Philippine Defense  
Ribbon



Philippine Liberation Ribbon



ROK Presidential  
Unit Citation



RVN Gallantry  
Cross with Palm



Republic of Vietnam  
Campaign Medal



Kuwait Liberation Medal,  
Kingdom of Saudi Arabia

# UNITED STATES MILITARY DECORATIONS



World War II  
Victory Medal



Army of Occupation  
Medal



Korean Service Medal



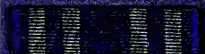
Antarctica Service Medal



Southwest Asia  
Service Medal



Humanitarian  
Service Medal



AF Longevity  
Service Award Ribbon



Armed Forces  
Reserve Medal



Small Arms Expert  
Marksmanship Ribbon



Air Force Training Ribbon



Philippine Independence  
Ribbon



Philippine Presidential  
Unit Citation



United Nations  
Service Medal



United Nations Medal










Kuwait Liberation Medal,  
Government of Kuwait

# AIR FORCE

0-1	0-2	0-3	0-4	0-5	0-6	0-7	0-8	0-9	0-10	SPECIAL	
SECOND LIEUTENANT	FIRST LIEUTENANT	CAPTAIN	MAJOR	LIEUTENANT COLONEL	COLONEL	BRIGADIER GENERAL	MAJOR GENERAL	LIEUTENANT GENERAL	GENERAL	GENERAL OF THE AIR FORCE	
Airman Basic (No Insignia)	Airman E-1	Airman E-2	Airman First Class E-3	Senior Airman E-4	Chief Master Sergeant E-9	First Sergeant E-8	Master Sergeant E-9	Technical Sergeant E-6	Master Sergeant of the Air Force E-7		

# ARMY

	SECOND LIEUTENANT	0-1		FIRST LIEUTENANT	0-2		CAPTAIN	0-3		MAJOR	0-4		LIEUTENANT COLONEL	0-5		COLONEL	0-6	★	BRIGADIER GENERAL	0-7	★★	MAJOR GENERAL	0-8	★★★	LIEUTENANT GENERAL	0-9	★★★★	GENERAL	0-10		GENERAL OF THE ARMY	SPECIAL
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Sergeant  
Major  
of the  
Army  
E-9



Command  
Sergeant  
Major  
E-9



First  
Sergeant  
E-8



Master  
Sergeant  
E-8



Sergeant  
Major  
E-9



Staff  
Sergeant  
First Class  
E-7



Sergeant  
First Class  
E-6



Corporal  
Sergeant  
E-5



Corporal  
E-4



Private  
First  
Class  
E-3














Private  
E-2

(No Insignia)  
Private  
E-1



Specialist 4











# NAVY

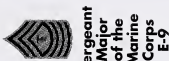
	<b>Ensign</b>	0-1
	<b>Lieutenant Junior Grade</b>	0-2
	<b>Lieutenant</b>	0-3
	<b>Lieutenant Commander</b>	0-4
	<b>Commander</b>	0-5
	<b>Captain</b>	0-6
	<b>Rear Admiral (Lower)</b>	0-7
	<b>Rear Admiral (Upper)</b>	0-8
	<b>Vice Admiral</b>	0-9
	<b>Admiral</b>	0-10
	<b>Fleet Admiral</b>	<b>SPECIAL</b>



**Seaman** **Seaman** **Seaman Petty Officer** **Petty Officer** **Petty Officer** **Chief** **Senior Chief Master** **Chief Master** **Chief**  
**Recruit** **Apprentice** **E-3** **Third Class** **Second Class** **First Class** **Petty Officer** **Petty Officer** **Petty Officer** **Petty Officer**  
**E-1** **E-2** **E-3** **E-4** **E-5** **E-6** **E-7** **E-8** **E-9** **E-9** **E-9** **E-9** **E-9** **E-9** **E-9** **E-9** **E-9**

# MARINES

	<b>SECOND LIEUTENANT</b>	<b>0-1</b>									
	<b>FIRST LIEUTENANT</b>	<b>0-2</b>									
	<b>CAPTAIN</b>	<b>0-3</b>									
	<b>MAJOR</b>	<b>0-4</b>									
	<b>LIEUTENANT COLONEL</b>	<b>0-5</b>									
	<b>COLONEL</b>	<b>0-6</b>									
	<b>BRIGADIER GENERAL</b>	<b>0-7</b>									
	<b>MAJOR GENERAL</b>	<b>0-8</b>									
	<b>LIEUTENANT GENERAL</b>	<b>0-9</b>									
	<b>GENERAL</b>	<b>0-10</b>									



**Sergeant Major of the Marine Corps**  
E-9



**Sergeant Major**  
E-9



**First Sergeant**  
E-8



**Gunnery Sergeant**  
E-7



**Staff Sergeant**  
E-6



**Corporal Sergeant**  
E-5



**Corporal**  
E-4



**Lance Corporal**  
E-3



**Private First Class**  
E-2



**Private**  
E-1


















**Master Gunnery Sergeant**  
E-9



**Master Sergeant**  
E-8

# WARRANT OFFICERS

NAVY	MARINES	ARMY
 <p>Warrant Officer</p>	 <p>Warrant Officer WO-1</p>	 <p>Warrant Officer W1</p>
 <p>Chief Warrant Officer</p>	 <p>Chief Warrant Officer CWO-2</p>	 <p>Chief Warrant Officer CW2</p>
 <p>Chief Warrant Officer</p>	 <p>Chief Warrant Officer CWO-3</p>	 <p>Chief Warrant Officer CW3</p>
 <p>Chief Warrant Officer</p>	 <p>Chief Warrant Officer CWO-4</p>	 <p>Chief Warrant Officer CW4</p>
 <p>Chief Warrant Officer</p>	 <p>Chief Warrant Officer CWO-5</p>	 <p>Chief Warrant Officer CW5</p>

\* The grade of Warrant Officer (W-1) is no longer in use.



## The United States Army

The United States Army was founded on 14 June 1775 by an act of the Continental Congress in response to increased British military activity in the Thirteen Colonies. George Washington, who was appointed by an act of the “General of the Armies,” became our first Commander and Chief of the United States Army.

Since its inception in 1775, the United States Army has fought or been employed in fourteen major wars, conflicts and campaigns. In the twentieth century, the United States Army has fought in WWI, WWII, Korea, the Dominican Republic, Vietnam, Grenada, Panama and Desert Storm. Additionally, the US Army has been involved in several peace-keeping, humanitarian, disaster relief, both home and abroad, and regional security operations throughout the globe. The United States Army has been an all-volunteer force since the expiration of the Selective Service Act in 1973.

The mission of the United States Army is to protect and defend the Constitution of the United States of America. The Army performs this mission by deterring war and, when deterrence fails, by achieving quick, decisive victory—on and off the battlefield—anywhere in the world and under any conditions as part of a joint team. Members of the Army, as with all other uniformed services of the United States, swear to support and defend the Constitution against all enemies, foreign and domestic. Proper subordination to political authority, loyalty, duty, selfless service, courage, integrity, respect for human dignity, and a sense of justice are all part of the Army’s identity.

The objective and purpose of the United States Army is firmly established in Title 10, United States Constitution and reads as follows:

**It is the intent of congress to provide an Army that is capable, in conjunction with the other armed forces, of:**

**(1) preserving the peace and security and providing for the defense of the United States, the Territories, Commonwealths, and possessions and any areas occupied by the United States;**

**(2) supporting the national policies;**

**(3) implementing the national objectives; and**

**(4) overcoming any nation responsible for aggressive acts that imperil the peace and security of the United States.**

The organization of the Department of the Army is similar to the Department of the Air Force. It is an organizational component of the Department of Defense and under the command and control of the National Command Authority. The Department of the Army command structure below the National Command Authority, includes the Secretary of the Army and the Army Staff. Each of these elements, to include their assistants and assigned staffs, are responsible for the upper echelon management of the US Army. They provide command and control, communications, intelligence, administration, training, budgeting, war plans, logistics, equipment and manpower requirements for the Army's current and future needs.

The US Army consists of not only active duty forces but is augmented by the US Army Reserve and Army National Guard units who stand ready to support the active Army forces when the need arises. Assigned to major commands throughout the world, these forces are organized under

tactical units called corps, divisions, brigades, and smaller supporting units.

The mission of the Army is carried out through eleven major Army field Commands. The type of organization and associated missions of each command are as follows:

a. **Forces Command (FORSCOM)**: Its primary mission is to provide the National Command Authority a strategic land force of Army units, capable of responding to any assigned mission in peace or war, anywhere in the world.

b. **US Army Training and Doctrine Command (TRADOC)**: Responsible for determining how the total Army will train, fight and how it will be organized and equipped.

c. **United States Army South (USARSO)**: Serves as the US Southern Command's Army component, maintaining a high state of force readiness in defense of the Panama Canal, support for democracy in Panama and throughout the region, military-to-military and nation assistance programs, support for counterdrug initiatives, and implementation of the Panama Canal Treaties.

d. **US Army Materiel Command (AMC)**: Directs the development, test and evaluation, procurement, distribution, maintenance, and disposal of nearly all Army equipment.

e. **US Army Space and Missile Defense Command (SMDC)**: Ensures that the soldier in the field has access to space assets and their products. The command also seeks to provide effective missile defense for the nation and deployed forces.

f. **Military Traffic Management Command (MTMC)**: Surface transportation component of DoD's U.S. Transportation Command. MTMC's top priority is logistics support to DoD's war-fighting commanders during peace and war, and in peacekeeping and humanitarian relief efforts around the world.

g. **US Army Pacific (USARPAC)**: Provides trained and ready forces for USCINCPAC in support of military operations and peacetime engagements in the Asia-Pacific AOR in order to contribute to regional stability, crisis response, and decisive victory.

h. **US Army Military District of Washington (MDW)**: Responsible for the designated functions in the metropolitan area of Washington DC.

i. **US Army Central Command (USARCENT)**: Army component headquarters of U.S. Central Command. Provides command and control of assigned and attached Army and designated Joint/Combined forces operating within the USCENTCOM area of operations.

j. **US Total Army Personnel Command (PERSCOM)**: Integrates, manages, monitors, and coordinated total Army personnel systems to develop and optimize utilization of the Army's human resources in peace and war.

k. **US Army Corps of Engineers (USACE)**: Manages Army real property, executes engineering, construction, civil works and real estate programs for both the Army and the Air Force.

Designed around flexibility, Army combat units afford the commander the ability to "Task Organize" units to meet multiple and diverse missions.

A corps is the Army's largest tactical unit. It is the instrument with which higher echelons of command conduct maneuver at the operational level. Corps are responsible for planning and conducting major operations and battles. They are tailored for a specific theater and mission and contain all organic combat and combat support type units and capabilities.

A division is the basic unit of maneuver at the tactical level. It is the largest Army fixed organization that trains and

fighters as a tactical team. There are usually 2-5 divisions assigned to Corps. Divisions are designed to be largely self-sustaining and are capable of independent operations for long periods when properly reinforced. Divisions are classified as heavy or light depending on their predetermined capability for rapid and strategic deployment.

A brigade is subordinate to a division and task organized for specific missions. The brigade's chief tactical responsibility is synchronizing the plans and actions of the units to accomplish a single task for divisions or corps based on the overall operational plan. There are usually 3-5 brigades assigned to a division.

There are additional units and organizations such as battalions, companies, platoons and squads that make up the internal force structure of each tactical unit and are a necessary component to the successful accomplishment of all assigned missions and tasks.

The US Army is divided into twenty branches of service and combat-classified into three functional categories. This system acts as a management tool for assigning and training of personnel and equipping of units based on their branch assignment and combat classification. The three combat categories are Combat Arms, Combat Support and Combat Services Support. Combat Arms involve personnel and equipment directly used in the conduct of actual fighting which include branches such as Infantry, Aviation, Field Artillery, Air Defense Artillery and Armor. Combat Support provides operational assistance to combat arms, including engagement in combat when necessary, but who have additional responsibilities in providing front line logistical and administrative support. This category includes branches such as Signal Corps, Military Intelligence, Chemical Corps, and Military Police. Combat Services Support provides pure logistical and administrative support and is not directly

engaged in combat operations. The branches assigned to this category include Transportation, Quartermaster, Medical, Dental, Ordinance, Chaplain, and Judge Advocate General.

The US Army has repeatedly demonstrated its skill and effectiveness as a fighting force both in peace and in war and is dedicated to maintaining a high degree of combat readiness.

“A professional soldier understands that war means killing people, war means maiming people, war means families left without fathers and mothers. All you have to do is hold your first dying soldier in your arms, and have that terribly futile feeling that his life is flowing out and you can’t do anything about it. Then you understand the horror of war. Any soldier worth his salt should be antiwar. And still there are things worth fighting for.”

**- Gen H. Norman Schwarzkopf**

“Require nothing unreasonable of your officers and men, but see that whatever is required be punctually complied with. Reward and punish every man according to his merit, without partiality or prejudice; hear his complaints; if well founded, redress them; if otherwise, discourage them, in order to prevent frivolous ones. Discourage vice in every shape, and impress upon the mind of every man, from the first to the lowest, the importance of cause, and what it is they are contending for.”

**- George Washington**

# United States Military Academy

The US Military Academy is located at West Point, New York, along the Hudson River 50 miles north of New York City. Many tourists are attracted each year to see West Point and its various attractions.

West Point was established in 1802. Since 1817, when Colonel Sylvanus Thayer, "Father of West Point," took command to establish its renowned system of study and discipline, the "long gray line" has produced such greats as Lee, Grant, Pershing, Arnold, Patton, MacArthur, and Eisenhower.

The Military Academy offers a well-balanced 4-year curriculum in mathematics, science, social sciences, and humanities. Every cadet follows the basic curriculum with an enrichment program open to all those wishing further study. Upon graduation, cadets receive a Bachelor of Science degree plus a commission as Second Lieutenants in the US Army.

Before acceptance into the Corps, however, cadets must go through an intensive summer program called "Beast Barracks." There they learn the fundamentals necessary to become a member of the Corps, and begin to develop the high standards of discipline, personal integrity, leadership, and honor essential to a career officer. The Corps of Cadets is organized into a Brigade under supervision of the Office of the Commandant. The Brigade is organized into four regiments. Each regiment includes two battalions, and each battalion has 4 companies for a total of 32 companies.

The high point of each year comes in June Week. To the plebe it means the completion of the grueling first year. And to the first classman, it is the culmination of 4 years hard work to earn the coveted gold bars, and a commission in the regular Army.

## The United States Navy

On October 13, 1775, the Continental Congress authorized the outfitting of a 10-gun warship. This marked the birth of the US Navy. Aided by the French, the US Navy played a crucial role in the Revolutionary War and had its share of heroes. John Paul Jones, commanding the *Bonhomme Richard*, colorfully illustrated the Navy's spirit when he answered a British request for surrender with the words, "I have not yet begun to fight!"

The post-revolutionary period was a prelude to the buildup-drawdown cycle that the Navy has experienced throughout its history. Following the war, America looked forward to a time of neutrality and peace and did without a navy for over 9 years until the rise of the Barbary Pirate States (Morocco, Algeria, Tunisia, and Tripoli). Numerous pirate attacks on defenseless US merchant ships led to the rebirth of the Navy in 1794 when President Washington signed into law "an act to provide a naval armament." This act provided for the building of six frigates including the *USS Constitution*, later nicknamed Old Ironsides. In support of the new naval armament, the Navy Department was established on April 30, 1798.

After thwarting the Barbary pirates, the Navy played a major role in the defeat of the British in the War of 1812. When President Madison declared war, the British fleet vastly outnumbered the US fleet 600 warships to 17. Character and leadership, symbolized by the command "Don't give up the ship!" on Oliver Hazard Perry's battle flag, were essential to victory. The naval victory over the British marked the rise of the US as a major sea power.

In the 45 years before the Civil War, the Navy battled piracy, explored, and experimented. This period saw the advent of steam propulsion, iron hulls, exploding shells, and



rifled barrels. To meet the many challenges faced by the expanding maritime nation in this age of technological advancement, the Navy established the Naval Academy on October 10, 1845, at Annapolis, Maryland. Throughout the period, the Navy also gained experience in riverine and amphibious warfare. Amphibious support to more than 8,000 troops proved critical to the success of General Winfield Scott at Vera Cruz in 1847.

“The successful amphibious and riverine operations were the basis for the Union’s Anaconda Plan during the Civil War. The Navy’s principle role in the strategy was to blockade the Gulf of Mexico and the eastern seaboard, in effect strangling the South. Later, the Navy would cut off Texas, Arkansas, and Louisiana through control of the Mississippi River.”

Following the Civil War, the Navy suffered another decline for 20 years but was revived in the 1880s upon a wave of nationalism. During this time the Navy built its first ships that combined steam and steel, established the Naval War College in 1884, and in 1898 defeated the Spanish fleet at Manila Bay and Santiago.

Together with the growth of the world’s great navies at the turn of the century, modern naval thought emerged, and was stimulated and profoundly affected by the writings of Rear Admiral Alfred Thayer Mahan. In *The Influence of Sea Power Upon History*, Mahan made the initial attempt to form naval theory by linking it with military theory. Today, his writings remain perhaps the most important contribution to the intellectual heritage of the Navy.

Influenced by Mahan, President Theodore Roosevelt in 1907 ordered the four battleship divisions of the Atlantic Fleet, called the Great White Fleet, to sail around the world. Fourteen months later, the Great White Fleet returned to Hampton Roads, completing its unprecedented 46,000 mile voyage.

Roosevelt concluded that it was the most important service that he rendered to peace.

When the US entered World War I in 1917, the Navy was ready to help the British escort convoys and proved successful in sinking many German U-boats. During the inter-war years, the Navy successfully incorporated air power into the fleet. In 1922, the *USS Langley* (CV 1), a converted coal-carrier, was commissioned, and Naval Aviation was born. The Washington Treaty, signed in 1923 to prevent a naval arms race, limited the size and numbers of battleships and carriers, but the Navy continued research and development including the first sea trials of an experimental radar in 1937.

The surprise attack on Pearl Harbor on December 7, 1941, inflicted severe damage on the Pacific Fleet and brought the US into World War II. Despite the initial setback, the Navy remained engaged in both the Atlantic and Pacific theaters. Only five months after Pearl Harbor, the Navy stopped the Japanese advance into the southwest Pacific at the Battle of the Coral Sea. Conducted solely by air groups, this was the first naval engagement in which the opposing fleets remained out of visual range. One month later, the Navy sank four enemy carriers at the Battle of Midway, ending the Japanese initiative in the Pacific. Once on the offensive, the Navy supported numerous amphibious operations in support of the Marines and the Army including D-Day. The assault on Normandy, supported by over 2500 Navy ships and craft, remains the largest amphibious assault in military history. World War II formally ended on September 2, 1945, when General MacArthur accepted the Japanese surrender on board the *USS Missouri* (BB 63) in Tokyo Bay.

Throughout the Cold War, the Navy consistently supported the national security strategy of containment around the world.

Operations included the daring amphibious landing at Inchon in Korea, remaining on Yankee Station throughout the Vietnam War in support of numerous missions including Linebacker II, and maintaining a forward presence in the volatile Middle East. The Navy strongly supported another phenomenon of the Cold War, the race to the moon. Navy Commander Alan B. Shephard, riding the Mercury capsule, Freedom 7, became the first American in space. And it was Neil Armstrong, a Korean War Navy fighter pilot, and Apollo 11 mission commander, who first set foot on the moon. His words at that moment, "One small step for man, one giant leap for mankind!" remain forever etched in history. In another historic moment, the Skylab I team, composed entirely of naval aviators, operated the first orbiting space laboratory.

The Navy also made great technological advancements in the fifties and sixties. Guided by the vision of Admiral Rickover, the Navy entered the nuclear age. In 1955 the first nuclear powered submarine, the *USS Nautilus* (SSN 571) was commissioned. Today, nuclear powered ballistic and fast attack submarines remain on patrol around the globe.

The early 1980s marked the beginning of the largest build-up in naval history. The vision was a 600 ship navy. The first Trident ballistic missile submarines and the highly specialized Aegis-class cruisers and destroyers were commissioned. Additional Nimitz-class nuclear powered aircraft carriers entered the fleet. Four World War II battleships, including the *USS Missouri* (BB 63), were recommissioned and upgraded with Harpoon anti-ship missiles and Tomahawk Land Attack Missiles (TLAMs). A revitalized Navy carried out the successful raid on Libya in 1986 and escorted reflagged Kuwaiti tankers in the Persian Gulf during the Iran-Iraq war.

## Into the 21st Century: From the Sea

The fall of the Berlin Wall in 1989 and the breakup of the Soviet Union marked the end of the Cold War and great changes for the US Navy. No longer concerned with engaging and defeating the Soviet fleet on the open ocean, the Navy has advanced a new maritime strategy. The Navy's present maritime strategy, *From the Sea*, focuses on littoral warfare and seeks to support the four primary elements of the National Military Strategy: forward presence, crisis response, strategic deterrence and reconstitution. For the Navy to be successful, *From the Sea* cites four key operational capabilities the Navy must maintain jointly with the Army, Air Force, and Marine Corps. The four capabilities include command, control, and surveillance (C2S), battlespace dominance, power projection, and force sustainment. These missions include maintaining the Navy's leg of the nuclear triad, ballistic missile submarines, and sealift operations.

In Desert Shield and Desert Storm, the Navy demonstrated its ability to respond to a major regional conflict and support the national security strategy. Deployed in the Persian Gulf, the Mediterranean, and the Indian Ocean, the Navy was the first on the scene when Iraq invaded Kuwait. Aircraft carriers and their composite airwings provided a strong deterrent to any move south by Iraqi forces into Saudi Arabia. Ohio-class ballistic submarines were an effective strategic deterrent against Iraq's chemical and biological weapons. The Navy's Maritime Prepositioning Squadrons were essential to reconstitution and force sustainment of the Army, Air Force, and Marine Corps.

Since the end of Desert Storm in 1991, the Navy has responded to numerous contingencies: supporting operations in Haiti, countering the build-up of Iraqi forces along the Kuwait-

Iraq border, and covering the withdrawal of UN forces from Somalia. Although facing cutbacks and downsizing to just over 320 ships, the Navy is building new Avenger-class minesweepers and Wasp-class amphibious assault ships to support the expeditionary forces in littoral warfare. Now and into the 21st century, the US Navy stands ready to respond swiftly and on short notice to fast paced events. Possessing the ability to project sustained, precise power without first having to secure basing or overflight rights, the US Navy will continue to provide a visible deterrent to all would-be adversaries.

# The United States Marine Corps

## The Early Years

The Continental Congress recognized the need for 'soldiers of the sea' and therefore authorized two battalions of Marines to be raised. Captain Samuel Nicholas, of Philadelphia, was commissioned captain on 28 November 1775 and charged with raising the Marines authorized by Congress to form part of the Naval Service. Nicholas remained senior officer in the Continental Marines through the Revolution and is considered the first Commandant.

The initial Marine recruiting rendezvous opened at Tun Tavern, in Philadelphia. By early 1776, the organization had progressed to the extent that the Continental Marines were ready for their first expedition. The objective was New Providence Island (Nassau) in the Bahamas, where a British fort and large supplies of munitions were located. With Captain Nicholas in command, 234 Marines sailed from Philadelphia in Continental warships. On 3 March 1776, Captain Nicholas led his men ashore, took the fort, and captured the powder and arms for Washington's army.

For the first time in U.S. history, the Marines had landed and the 'situation was well in hand'.

After the end of the Revolution in 1783, both Continental Navy and Marines waned into temporary obscurity. Congress recreated the Marine Corps as a military service on 11 July 1798. Major William Ward Burrows was appointed major and Commandant of the Marine Corps.

During the decade that followed, the Naval War with France (1798-1800) and the campaign against the Barbary corsairs (1801-05) provided employment for the Corps. In 1805, First Lieutenant Presley O'Bannon led a mixed force,

including Marines, six hundred miles across the Libyan desert to attack the fortress at Derna. O'Bannon's handful of Marines were the first U.S. forces to hoist the Stars and Stripes over territory in the Old World. The 'Mameluke' sword, carried by Marine officers to this day, symbolizes O'Bannon's feat.

Following the War of 1812, on 17 October 1820, Archibald Henderson became the fifth Commandant. During the thirty-nine years that followed, Henderson dominated the Corps and gave it the high military character it holds to this day. Henderson thwarted President Jackson's attempt to transfer the Marines into the Army. In 1834, after the controversy faded, Congress placed the Marine Corps directly under the Secretary of the Navy and increased the service's strength. This was the first instance of congressional redress and rescue for the Corps, an act which has recurred repeatedly since.

From these proud beginnings Marines have established the legacy of the term 'Marine.' Marines represent a national institution. Its standing and reputation is in the hands of every Marine. In every climate and place Marines have stood vigil ashore and afloat. Readiness and amphibious expertise remain the hallmark of the Marine Corps. As long as our nation possesses and exercises command of the seas, Marines will form its cutting edge.

### **Organization of the Marine Corps**

For organizational purposes, the Marine Corps is divided into two broad categories: the operational forces and the supporting establishment. The supporting establishment includes Headquarters Marine Corps; individual bases, posts and stations; training activities and formal schools; the Marine Corps logistics bases; Marine Corps Combat Development Command; and Marine Corps Systems Command.

Seventy percent of all marines now serving on active duty are assigned to the operating forces, which include the Fleet Marine Forces, Marine Security Forces at naval installations and in shipboard detachments, and the Marine Security Guard Battalion, which trains Marine security guards and posts them to American embassies and other U.S. diplomatic missions around the world. By far, the largest number of operational force Marines are members of two Fleet Marine Forces.

Those two forces are Marine Forces Pacific (MARFORPAC) and Marine Forces Atlantic (MARFORLANT) frequently referred to, in combination, by Marines, simply as "the Fleet Marine Force," or "the FMF."

### **Marine Forces Pacific**

Substantially larger than MARFORLANT, both in numbers of Marines and quantities of combat equipment, is Marine Forces Pacific. Headquartered at Camp Smith, near Pearl Harbor, Hawaii, the Commanding General, COMMARFORPAC, provides leadership for a force spread over nearly half of the globe. With two Marine Expeditionary Forces (MEF), the I MEF based in Southern California, and the III MEF, based in the Pacific MARFORPAC, there is a force-in-readiness with a long history of contributing to the stability throughout the Pacific region and Southeast Asia.

### **Marine Forces Atlantic**

Subordinate MARFORLANT commands include: three major ones—the 2nd Marine Division, headquartered at Camp Lejeune, North Carolina; the 2nd Marine Aircraft Wing, headquartered at Marine Corps Air Station Cherry Point, North Carolina; and the 2nd Force Service Support Group, headquartered at Camp Lejeune.



## Marine Air Ground Task Forces

The blending of U.S. Marine Corps combat, combat support, and combat service support forces into air-ground task forces for specific missions is undertaken to maximize the combat power of each of the Corps' warfighting elements. Marine air-ground task forces are organized from existing Fleet Marine Force elements which generally are able to train together prior to deployment for combat operations. All MAGTFs, whatever their size, have the same basic structure: a command element, a ground combat element, an aviation combat element, and a combat service support element capable of supporting the entire MAGTF.

The **command element** provides a command and control system for planning and execution of operations.

The **ground combat element** conducts ground combat operations. It is comprised of an infantry unit that varies in size from a platoon or company of 40-200 Marines to one or more divisions of 20,000 Marines each.

The **aviation combat element** conducts air operations and provides aviation support to the ground combat element and the combat service support element. It is comprised of aviation units that vary in size from a composite helicopter squadron to one or more Marine Aircraft Wings.

The Marines adopted the Latin phrase "Semper Fidelis" ("Always Faithful"), sometimes abbreviated "Semper Fi," as their official motto circa 1883. The first aviation unit was created in 1913, with Major Alfred A. Cunningham as the first Marine pilot.

The MAGTF **combat service support element** provides landing support, maintenance, transportation, general engineering and essential personnel services, the later of which

provides health, disbursing, postal, base exchange, information systems, legal, civil affairs, and security services.

The four basic types of MAGTFs are: The Marine Expeditionary Force (MEF) 51,000 personnel, Marine Expeditionary Brigade (MEB) 15,000 personnel, Marine Expeditionary Unit (MEU) 2,200 personnel, and Special Purpose Force.

## **United States Naval Academy**

In 1845, Navy Secretary George Bancroft was given permission by the War Secretary to use 10 acres of land in Old Fort Severn to build a permanent “Naval School” ashore. The school was initially designed to provide the highest caliber of training for naval officers in order to meet the challenge of a quickly changing Navy, particularly with the shift of naval vessels from sail to steam propulsion. In 1850 the “Naval School” was renamed the United States Naval Academy.

In just a few decades the Navy evolved from a fleet of sail and steam-powered ships to a high-tech fleet with nuclear-powered submarines, surface ships and supersonic aircraft. As the U.S. Navy continued to grow over the years, so did the United States Naval Academy. The campus of 10 acres increased to 338 acres. The original student body of 60 midshipmen grew to a brigade of 4,000 midshipmen. Modern granite buildings replaced the old wooden structures of Old Fort Severn and the “Naval School”.

As the Navy changed and the Academy grew, so did the academic and professional training of the midshipmen. A new curriculum went into effect requiring midshipmen to study at the Naval Academy for 4 years and participate in a wide variety of

summer training cruises. That format continues to be the basis for a more advanced and sophisticated curriculum at the Naval Academy. When entering the Naval Academy, a plebe spends the summer becoming intimately acquainted with the history, customs and traditions of the Navy, learning how to shoot a rifle and pistol, sail small boats, and to participate in small unit drill. Additionally, midshipmen can choose up to 18 major fields of study, including a wide variety of elective courses, intramural sports, advanced studies and research opportunities, leading to a bachelor of science degree upon graduation and a commission in the United States Navy or United States Marine Corps.

During the past century our country's Navy has fostered the traditions of its great heroes, and throughout the beautiful Yard at the Naval Academy are monuments to their achievements. Midshipmen come in contact with these rich traditions every day, so it is little wonder that a repository of the Navy's **esprit de corps** is the United States Naval Academy at Annapolis, Maryland. It is the **esprit de corps**, matched with our own each year, that makes the friendly rivalry between the two service academies the occasion of the most spirited sports contest of the nation.

## United States Coast Guard

The Coast Guard is the primary federal agency with maritime authority for the United States. The service responds to tasks in several mission and program areas.

The Service's multi-mission approach permits a relatively small organization to respond to public needs in a wide variety of maritime activities and to shift emphasis on short notice when the need arises.

The Coast Guard's four main missions are Maritime Law Enforcement, Maritime Safety, Marine Environmental Protection, and National Security.

These missions mandate the Coast Guard to:

- Remain constantly ready to defend the United States, ensure national security, and protect national interests.

- Minimize loss of life and property, personal injury and property damage at sea and in U.S. waters.

- Enforce U.S. laws and international agreements.

- Assure the safety and security of marine transportation, ports, waterways, and shore facilities.

- Promote marine transportation and other waterborne activity in support of national economic, scientific, defense, and social needs.

- Protect the marine environment and its creatures.

- Assure effective U.S. presence in the polar regions.

- Project the interests of the United States in relationships with other maritime nations around the world.

- Assist other agencies in the performance of their duties and cooperate in joint maritime ventures.

- Provide an effective maritime communications system.

- When directed by the President, operate as a Service in the U.S. Navy.

In support of these four main missions, Coast Guard people perform the following jobs on a routine daily basis: aids to navigation, boating safety, defense operations, environmental response, maritime law enforcement, marine inspection, marine licensing, marine science, port safety and security, search and rescue, and waterways management.

It is interesting to note that the Coast Guard falls under the Department of Transportation. In peacetime, Maritime Defense Zone commanders are responsible for coastal defense planning and exercises. In wartime, under the Department of Defense, they conduct port security duties and U.S. coastal defensive operations within 200 miles offshore. The service has participated in all major national conflicts, to include sinking of German U-boats in WWII, SAR in Vietnam, and waterside security in the Gulf War.

The Coast Guard has its roots in the Revenue Cutter Service, started 4 August 1790. However, it did not gain its current name until it was combined with the Lifesaving Service in 1915. Later the Coast Guard would take on the responsibilities of the International Ice Patrol and the United States Lighthouse Service.

### COAST GUARD

**Coast Guard enlisted rating badges are the same as the Navy's for grades E-1 through E-8. E-7s through E-9s have silver specialty marks, eagles and stars, and gold chevrons. The badge of the Master Chief Petty Officer of the Coast Guard has a gold chevron and specialty mark, a silver eagle and gold stars. Coast Guard officers use the same rank insignia as Navy officers. For all ranks, the gold Coast Guard shield on the uniform sleeve replaces the Navy star.**

## United States Coast Guard Academy

The Coast Guard Academy was chartered in 1876 when nine cadets boarded the schooner *Dobbin* for initial training. From 1878 to 1907 the new 250-ton bark, the *Chase*, served as the cadet training ship. After numerous changes in location from Curtis Bay, Maryland; Portsmouth, New Hampshire; Port Royal, South Carolina; Fort Trumbull, Connecticut; the new training ships *Itasca* and *Alexander Hamilton* found permanent port in New London, Connecticut, in 1932.

The cadet corps is divided into four classes, equally distributed into eight companies. All cadets are housed in Chase Hall. The initial training period, "Swab Summer," is much like that of the other service academies in that it is a time for learning about the service, the Academy, and the basic rudiments of seamanship. After the first year, cadets are taken on a summer cruise on the present training ship, the *Eagle*. Visiting foreign ports and those along the United States coastline, the cruise acquaints them with active duty work conditions and gives them a practical knowledge of seamanship. Each cadet graduates with a Bachelor of Science degree and a commission as an Ensign in the Coast Guard. The Academy provides its service with the majority of its active duty commissioned officers.

The mission of the United States Coast Guard Academy is to graduate young men and women with sound bodies, stout hearts, and alert minds, with a liking for the sea and its lore, and with that high sense of honor, loyalty, and obedience which goes with trained initiative and leadership; well-grounded in seamanship, the sciences, and the amenities, and strong in the resolve to be worthy of the traditions of commissioned officers in the United States Coast Guard in the service of their country and humanity.

## **United States Merchant Marine Academy**

In 1938, the United States Merchant Marine Cadet Corps was officially founded. Four years later instruction was begun at Kings Point, Long Island, New York. Three of the four years of the cadets' training is spent at the 65 acre campus at Kings Point. One half of the third and second class years are spent at sea on ships of the Merchant Marine. The Academy's purpose is to furnish a Bachelor of Science degree and training for future officers of the Merchant Marine.

## Phonetic Alphabet

<b>A</b>	<b>Alfa</b>
<b>B</b>	<b>Bravo</b>
<b>C</b>	<b>Charlie</b>
<b>D</b>	<b>Delta</b>
<b>E</b>	<b>Echo</b>
<b>F</b>	<b>Foxtrot</b>
<b>G</b>	<b>Golf</b>
<b>H</b>	<b>Hotel</b>
<b>I</b>	<b>India</b>
<b>J</b>	<b>Juliett</b>
<b>K</b>	<b>Kilo</b>
<b>L</b>	<b>Lima</b>
<b>M</b>	<b>Mike</b>
<b>N</b>	<b>November</b>
<b>O</b>	<b>Oscar</b>
<b>P</b>	<b>Papa</b>
<b>Q</b>	<b>Quebec (Kay-beck)</b>
<b>R</b>	<b>Romeo</b>
<b>S</b>	<b>Sierra</b>
<b>T</b>	<b>Tango</b>
<b>U</b>	<b>Uniform</b>
<b>V</b>	<b>Victor</b>
<b>W</b>	<b>Whiskey</b>
<b>X</b>	<b>X-ray</b>
<b>Y</b>	<b>Yankee</b>
<b>Z</b>	<b>Zulu</b>



## Air Force Section





**F. Whitten Peters**  
**Acting Secretary of the Air Force**

F. Whitten Peters is undersecretary of the Air Force, Washington, D.C. He is responsible for all actions of the Air Force on behalf of the secretary of the Air Force and is acting secretary in the secretary's absence.

Prior to being appointed to his current position, Mr. Peters was the principal deputy general counsel of the Department of Defense where he worked a wide range of issues, including acquisition reform, countering domestic terrorism, protecting the department's information systems, and affirmative action. Before serving as a senior executive with the federal government, Mr. Peters was a litigation partner at the Washington, D.C. law firm of Williams & Connolly, where he specialized in complex civil and criminal litigation, including the defense of government contract fraud, antitrust, tax, and security cases. He has extensive experience in representing individuals and corporations in compliance and ethics programs, internal investigations and suspension and debarment proceedings. He has written and spoken extensively on acquisition reform, legal ethics and criminal law issues.

Mr. Peters and his wife, Monnie, have three daughters: Elizabeth, Mary and Margaret.

### **Education:**

- 1968 Bachelor of Arts degree, government and economics, magna cum laude, Harvard College
- 1969 Distinguished graduate, Naval Officer Candidate School, Newport, R.I.
- 1974 Master of Science degree, economics, with distinction, London School of Economics, London, England.
- 1964 Doctor of Law, magna cum laude, Harvard Law School, Cambridge, MA.

### **Career Chronology:**

1. 1969 - 1972, U.S. Navy reserve officer, Fleet Intelligence Center Atlantic, Norfolk, VA.
2. 1972 - 1973, Frank Knox Traveling Fellow, Harvard University, Cambridge, MA.
3. 1975 - 1976, president, Harvard Law Review.

4. 1976 - 1977, law clerk to the Honorable J. Skelly Wright, U.S. Court of Appeals for the District of Columbia Circuit, Washington, D.C.
5. 1977 - 1978, law clerk to the Honorable William J. Brennan, Jr., Supreme Court of the United States, Washington, D.C.
6. 1978 - 1984, associate, Williams & Connolly Law Firm, Washington, D.C.
7. 1984 - 1995, partner, Williams & Connolly Law Firm, Washington, D.C.
8. 1987 - 1994, member, Legal Ethics Committee, District of Columbia Bar
9. 1988 - 1990, adjunct lecturer, government contracts, Columbus School of Law, The Catholic University of America, Washington, D.C.
10. 1990 - 1995, adjunct professor, advanced criminal procedure, Georgetown University Law Center
11. 1991 - 1993, member, Department of Defense Advisory Committee on Streamlining and Codifying Acquisition Law
12. 1991 - 1996, chair, Rules of Professional Responsibility Review Committee, District of Columbia Bar
13. 1993 - 1995, member, Rules Committee, U.S. Court of Appeals for the Armed Forces
14. 1995 - 1997, principal deputy general counsel, Office of the Secretary of Defense
15. 1996 - 1997, government representative, Defense Science Board study on vertical merger policy
16. 1997 - present, Undersecretary of the Air Force, Washington, D.C.
17. 1997 - present, Acting Secretary of the Air Force

### **Awards and Honors:**

Department of Defense Medal for Distinguished Public Service with Bronze Palm  
Sears Prize, Harvard Law School  
Frank Knox Fellowship, Harvard University  
Navy Meritorious Unit Commendation  
National Defense Service Medal

## **Professional Memberships and Affiliations:**

American Bar Association

Fellow, American Bar Foundation

District of Columbia Bar

Bars of the United States Courts of Appeals from the District of  
Columbia, Federal, Third and Eleventh Circuits

U.S. Court of Appeals for the Armed Forces

U.S. District Court for the District of Columbia

U.S. District Court for Maryland

U.S. Court of Federal Claims

U.S. Tax Court



**General Michael E. Ryan**  
**Chief of Staff**

General Michael E. Ryan is Chief of Staff of the U.S. Air Force, Washington, D.C. As chief, he serves as the senior uniformed Air Force officer responsible for the organization, training and equipping of 750,000 active duty, Guard, Reserve, and civilian forces serving in the United States and overseas. As a member of the Joint Chiefs of Staff, he and the other service chiefs function as military advisers to the secretary of defense, National Security Council, and the President.

The general entered the Air Force after graduating from the U.S. Air Force Academy in 1965. He has commanded at the squadron, wing, numbered air force, and major command levels. He flew combat in Southeast Asia, including 100 missions over North Vietnam. He also served in staff assignments at the major command level, Headquarters U.S. Air Force, and the Joint Staff. As commander 16th Air Force and Allied Air Forces Southern Europe in Italy, he directed the NATO air combat operations in Bosnia Herzegovina which directly contributed to the Dayton Peace Accords. Before assuming his current position, the general was commander of U.S. Air Forces in Europe and commander, Allied Air Forces Central Europe, with headquarters at Ramstein Air Base, Germany.

General Ryan and his wife, Jane, have four children: Michael, Mary Kathleen, Sean and Colleen.

### **Education:**

- 1965 Bachelor of Science degree, U.S. Air Force Academy, Colorado Springs, CO.
- 1969 Squadron Officer School, Maxwell Air Force Base, AL.
- 1970 Fighter Weapons Instructor Course, Nellis Air Force Base, NV.
- 1976 Air Command and Staff College, Maxwell Air Force Base, AL.
- 1976 Master's degree in Business Administration, Auburn University, AL
- 1984 National War College, Fort Lesley J. McNair, Washington, D.C.
- 1988 National Security Program, John F. Kennedy School of Government, Harvard University, MA.

### **Assignments**

1. June 1965 - September 1966, student, undergraduate pilot training, 3615th Student Squadron, Air Training Command, Craig Air Force Base, AL.

2. September 1966 - October 1967, F-4 pilot, 16th Tactical Fighter Squadron, Eglin Air Force Base, FL.
3. October 1967 - August 1968, F-4 pilot and aircraft commander, 13th Tactical Fighter Squadron, Udorn Royal Thai Air Force Base, Thailand.
4. August 1968 - January 1971, F-4 aircraft commander, 7th Tactical Fighter Squadron, Holloman Air Force Base, N.M.
5. January 1971 - July 1973, exchange officer instructing in Mirage III fighters, 2nd Operational Conversion Unit, Australian Air Force Base, Williamtown, Australia.
6. July 1973 - September 1974, instructor pilot and flight commander, 311th Tactical Fighter Training Squadron, Luke Air Force Base, AZ.
7. September 1974 - August 1975, wing weapons officer, 8th Tactical Fighter Wing (F-4s), Kunsan Air Base, South Korea.
8. August 1975 - July 1976, student, Air Command and Staff College, Maxwell Air Force Base, AL.
9. July 1976 - April 1979, staff officer, Office of the Deputy Chief of Staff for Plans, Headquarters Tactical Air Command, Langley Air Force Base, VA.
10. April 1979 - August 1981, commander, 61st Tactical Fighter Squadron; then assistant deputy commander for operations (F-16s), 56th Tactical Fighter Wing, MacDill Air Force Base, FL.
11. August 1981 - August 1983, chief, CHECKMATE group; then deputy assistant director for Joint and National Security Matters, Office of the Deputy Chief of Staff for Plans and Operations, Headquarters U.S. Air Force, Washington, D.C.
12. August 1983 - June 1984, student, National War College, Fort Lesley J. McNair, Washington, D.C.
13. June 1984 - June 1986, commander, 432nd Tactical Fighter Wing, Misawa Air Base, Japan.
14. June 1986 - June 1988, executive to the chief of staff, Headquarters U.S. Air Force, Washington, D.C.
15. June 1988 - July 1991, deputy chief of staff, plans; then deputy chief of staff, operations, Headquarters Tactical Air Command, Langley Air Force Base, VA.
16. July 1991 - May 1993, vice director for strategic plans and policy, the Joint Staff, Washington, D.C.
17. May 1993 - September 1994, assistant to the chairman, Joint Chiefs of Staff, Washington, D.C.



18. September 1994 - April 1996, commander, Allied Air Forces Southern Europe (NATO), Naples, Italy, and commander, 16th Air Force (United States Air Forces in Europe), Aviano Air Base, Italy.
19. April 1996 - October 1997, commander, U.S. Air Forces in Europe and commander, Allied Air Forces Central Europe, Ramstein Air Base, Germany.
20. October 1997 - present, chief of staff, Headquarters U.S. Air Force, Washington, D.C.

### **Flight Information:**

Rating: Command pilot

Flight hours: More than 3,400 including 149 combat missions

Aircraft flown: T-37, T-33, F-4C/D/E, Mirage III, Aeromacchi 362, F-16A/B/C/D and C-20

### **Major Awards and Decorations:**

Defense Distinguished Service Medal with oak leaf cluster

Distinguished Service Medal

Legion of Merit with two oak leaf clusters

Distinguished Flying Cross

Meritorious Service Medal with two oak leaf clusters

Air Medal with 11 oak leaf clusters

### **Effective Dates of Promotion:**

Second Lieutenant	Jun 9, 1965
First Lieutenant	Dec 9, 1966
Captain	Jun 13, 1968
Major	Jun 1, 1976
Lieutenant Colonel	Apr 1, 1979
Colonel	Jul 1, 1981
Brigadier General	May 1, 1988
Major General	Jan 1, 1991
Lieutenant General	May 10, 1993
General	Apr 4, 1996

(Current as of November 1997)



**Chief Master Sergeant Eric W. Benken**  
**Chief Master Sergeant of the Air Force**

Chief Master Sergeant Eric W. Benken is adviser to the Secretary and Chief of Staff of the U.S. Air Force on matters concerning welfare, effective utilization and progress of the enlisted members of the Air Force. He is the 12th Chief Master Sergeant appointed to this ultimate noncommissioned officer position.

Chief Benken was born 20 Aug 1951, in Cincinnati, OH, and entered the Air Force in March 1970. His background is in information management, and he has served in operational, maintenance, and support units at every level of command from squadron through major air command. He has served in Taiwan, Korea and South Vietnam, and in a joint service/NATO assignment at Supreme Headquarters Allied Powers Europe. Before assuming his current position, he served as the Senior Enlisted Adviser with the United States Air Forces in Europe at Ramstein Air Base, Germany. While at USAFE, the command was involved in operations such as PROVIDE PROMISE, PROVIDE COMFORT, DELIBERATE FORCE and JOINT ENDEAVOR in Bosnia.

Chief Benken has two sons and one daughter and is married to the former Johnne Ceravolo of Fort Walton Beach, FL.

### **Education:**

- 1977 Tactical Air Command Noncommissioned Officer Leadership School, Bergstrom Air Force Base, TX.
- 1986 Tactical Air Command Noncommissioned Officer Academy, Tyndall Air Force Base, FL.
- 1989 USAF Senior Noncommissioned Officer Academy, Gunter Air Force Base, AL.
- 1994 Associate degree in applied science, information management, Community College of the Air Force.

### **Assignments:**

1. March 1970 - April 1970, Basic Trainee, basic military training, Lackland Air Force Base, TX.
2. May 1970 - December 1970, Administrative Specialist, 2578th Supply Squadron, Ellington Air Force Base, TX.
3. January 1971 - March 1972, Administrative Specialist,

maintenance training section and maintenance quality control, 374th Tactical Airlift Wing, Ching Chuan Kang Air Base, Taiwan. Also assigned temporarily to Detachment 1, 834th Air Division, Tan Son Nhut Air Base, South Vietnam.

4. April 1972 - September 1978, Chief Clerk, 67th Reconnaissance Technical Squadron and noncommissioned officer in charge, director of operations administration, 67th Tactical Reconnaissance Wing, Bergstrom Air Force Base, TX.
5. October 1978 - October 1979, Executive Noncommissioned Officer to the Commander, 314th Air Division, Osan Air Base, Korea.
6. November 1979 - August 1983, Noncommissioned Officer in Charge, deputy commander for resources administration and noncommissioned officer in charge, 12th Air Force Command Section, Bergstrom Air Force Base, TX.
7. September 1983 - December 1988, Chief Administration Communications Division and Noncommissioned Officer in Charge, Deputy Chief of Staff, Aircrew Training Devices Administration,, USAF Tactical Air Warfare Center, Eglin Air Force Base, FL.
8. January 1989 - July 1993, Superintendent, Manpower and Document Control Division, Office of the United States National Military Representative, and Administrative Officer, Assistant Chief of Staff Operations and Logistics Division, Supreme Headquarters Allied Powers Europe, Mons, Belgium.
9. August 1993 - September 1994, Senior Enlisted Adviser to the Commander, 12th Air Force, Davis-Monthan Air Force Base, AZ.
10. October 1994 - October 1996, Senior Enlisted Adviser to the Commander, United States Air Forces in Europe, Ramstein Air Base, Germany.
11. November 1996 - present, Chief Master Sergeant of the Air Force, the Pentagon, Washington, D.C.

## **Major Awards and Decorations:**

Legion of Merit

Defense Meritorious Service Medal

Meritorious Service Medal with two oak leaf clusters

Joint Service Achievement Medal

Joint Meritorious Unit Award  
Vietnam Service Medal with campaign star  
Republic of Vietnam Gallantry Cross with Palm  
Republic of Vietnam Campaign Medal

**Effective Dates of Promotion:**

EAD	Mar 18, 70
Airman	Apr 29, 70
Airmen First Class	Oct 1, 70
Sergeant	Mar 1, 72
Staff Sergeant	Mar 1, 74
Technical Sergeant	May 1, 80
Master Sergeant	Oct 1, 84
Senior Master Sergeant	Nov 1, 88
Chief Master Sergeant	Feb 1, 91
Chief Master Sergeant of the Air Force	Nov 5, 96



## THE ORDER OF THE SWORD

The Order of the Sword custom dates back to the 12th century. Noncommissioned officers honored and pledged loyalty to their leader by presenting him a sword. The practice came to America during the Revolutionary War, but lay dormant until the 1860s when General Robert E. Lee received the sword from his troops.

Military Airlift Command – now Air Mobility Command – revived and updated the practice in 1967 when it presented the first sword to a brigadier general. Since then, more than 180 people have received a sword for their accomplishments on behalf of NCOs or the military. Recipients include entertainer Bob Hope, former Chief Master Sergeant of the Air Force Donald L. Harlow, and former Secretary of Defense William Perry. Hope and Harlow received major command swords, while Perry received the Air Force Order of the Sword.

## **U.S. Air Force Mission**

*To defend the United States through control and exploitation of air and space.*

## **U.S. Air Force Vision**

*Air Force people building the world's most respected Air and Space force . . . global reach and global power for America.*

## **Air Force Core Competencies**

*Air and Space Superiority*

*Global Attack*

*Rapid Global Mobility*

*Precision Engagement*

*Information Superiority*

*Agile Combat Support*

## **USAF Core Values**

*Integrity First*

*Service Before Self*

*Excellence in All We Do*

# **The United States Air Force Historical Perspective**

*by Major John Higgs*

During a cold December in 1903, Wilbur and Orville Wright made man's first controlled flights in powered, heavier-than-air vehicles. Although the longest flight lasted only 59 seconds and traveled just 852 feet, the air age had dawned. After establishing the Aeronautics Section of the Signal Corps in 1907, the War Department solicited bids for an airplane that could carry two people 40 miles per hour for 125 miles. The Wright Brothers were awarded the contract to produce this aircraft. On 2 August 1909, the Army officially accepted the Wright Brother's aircraft after Orville Wright and Lt Frank P. Lahm had remained aloft for over 1 hour and 12 minutes and averaged 42 miles per hour. From this inauspicious beginning, the United States Air Force has made exponential leaps forward in technological development and capability. This article will give you a brief historical account of the development which has produced "the world's most respected air and space force."

## **1907-1917**

During this period of time the fledgling new air service fought the suspicion and lack of understanding many military leaders held toward the airplane. Brigadier General James Allen, the Chief Signal Officer of the United States Army, questioned the merit of the airplane. He was skeptical of the airplanes use as an offensive weapon, stating that "for the purpose of dropping explosives on the enemy, a high speed aeroplane is hardly suitable . . . . In passing over the enemy's works a flying machine should travel at least 4,000 feet above the earth . . . . Traveling at the rate of thirty miles an hour at



this altitude, even after considerable practice, it is not thought a projectile could be dropped nearer than half a mile from the target." General Allen was not alone in his narrow view of aviation's utility. Assistant Secretary of War Henry S. Breckenridge testified before the House Military Affairs Committee in 1913 that military aviation was simply an additional form of communication, observation, and reconnaissance. The shortsightedness of the military establishment toward American air power resulted in an Army Aviation Section woefully unprepared for war.

In April 1917, when the United States entered World War I, the Army Aviation Section had 131 officers, 1087 enlisted men, and no combat capable aircraft. Almost 10 years had passed since the Army had accepted its Wright Flyer, but American air power was almost nonexistent.

## **World War I**

Upon entering the Great War on 6 April 1917, the United States ranked 14th among air powers of the world. The U.S. possessed not a single combat aircraft, yet vowed to fill the skies over Europe with "a cloud of planes." Brigadier General William "Billy" Mitchell, an observer of the air war prior to the United States' entry, studied the concepts of General Hugh Trenchard (Commander of the Royal Flying Corps' units in France) to formulate his own ideas for the application of air power. Mitchell took Trenchard's ideas of forward action and relentless offensive to heart. In 1917 he wrote his first formal statement of Air Service doctrine in a paper entitled "General Principles Underlying the Use of Air Service in the Zone of Advance A.E.F." Applying these principles, Mitchell successfully devised and executed a plan that put 1500 planes over the battlefield in support of American ground attacks at St. Mihiel. Despite heavy losses, Mitchell's command achieved air superiority over the battlefield and effectively

attacked enemy ground forces, airfields, and communications centers. By the war's end, Mitchell had gained a reputation as a flamboyant, outspoken, aerial tactician.

A number of excellent American flyers were involved in the war long before the U.S. entered in April 1917. They were the members of the Lafayette Escadrille. The best among these volunteers was the famous Raoul G. Lufbery. He led the 94th "Hat in the Ring" Aero Squadron, instructing future greats such as Eddie Rickenbacker in the intricacies of aerial combat. Lufbery's career ended with 17 confirmed and as many as 73 unconfirmed kills.

World War I was an age of men whose daring and courage brought them both fame and early death. During his four months in action, Captain Eddie Rickenbacker amassed 26 confirmed kills, with nearly the same number of unconfirmed kills, earning him the title of America's "Ace of Aces." Captain Rickenbacker was the first flyer to be awarded the Medal of Honor for conspicuous bravery during an engagement in September 1918.

Another pilot awarded the Medal of Honor during World War I was Lt. Frank Luke, Jr., the "Arizona Balloon Buster." He accomplished one of the most impressive feats of the war when he flamed 15 enemy balloons and 3 airplanes in the space of seventeen days. On 29 September 1918, he took off in search of German "Dracken." After destroying 3 more balloons, he was ambushed by German fighters. As a result of his bravery in destroying 3 aircraft and 18 balloons, he was awarded the Medal of Honor. Like Rickenbacker and Luke, all of the aviators of the first world war are remembered as heroes.

### **Between the Wars**

The post-World War I period was a time of organizational growth for the air service. It was marked by experimentation

and innovation in aircraft design, by achievements of air pioneers, and by continued controversy as the young air service attempted to gain its independence. Led by the irrepressible Billy Mitchell, the struggle to develop the air arm involved two main issues: the establishment of an independent air force and the development of a fundamental air power doctrine.

Two years after the conclusion of the war, Congress passed the Army Reorganization Act of 1920. This Act made the Air Service a combatant arm of the Army, much to the dismay of General Mitchell. Mitchell, who had become the Assistant Chief of the Air Service, went on the offensive. He reasoned that the Air Service would stand little chance of gaining independence unless it had a unique mission. While Mitchell was an outspoken advocate of strategic bombing, he realized that since the United States had entered a period of isolationism he would be unable to convince the War Department or Congress of the need for an independent Air Service to carry out this mission. Instead, he argued that the airplane made the battleship obsolete—therefore the Air Service could most effectively accomplish the mission of coastal defense. To prove his point Mitchell set up a demonstration in which his Martin MB-2 bombers would attack three captured German ships. Mitchell's aircrews sank all three ships, including the "unsinkable" Ostfriesland. Mitchell was subsequently transferred to Texas due to his incessant harassment of superior officers over the need to enlarge the Air Service and improve its equipment. Mitchell continued to press the attack, however, and was ultimately court-martialed for "conduct of a nature to bring discredit upon the military service." Instead of suffering this disgrace, he resigned and continued to voice his beliefs about air power until his death in 1936.

Major General Mason W. Patrick, Chief of the Air Service, also believed that Army control over the Air Service should be reduced, but directed his efforts toward gaining a greater degree of autonomy, rather than complete independence. In 1925 General Patrick urged the creation of an Air Corps with autonomy similar to that enjoyed by the Marine Corps within the Navy Department. His efforts were rewarded when Congress passed the Army Air Corps Act of 1926 which replaced the Air Service with a more independent Army Air Corps. Although the Act didn't change the organizational structure of the Air Service, it strengthened the concept that the air arm was offensive rather than just support and insured the Air Corps better representation in the War Department. It also authorized a plan to develop and expand the Air Corps over the next five years, thus giving the fledgling service the opportunity to develop its strategic bombing doctrine.

In 1930, Mitchell published his book, *Skyways*, which described his theory of strategic bombing:

The advent of air power which can go to the vital centers and entirely neutralize or destroy them has put a completely new complexion on the system of war. It is now realized that the hostile main army in the field is a false objective and the real objectives are the vital centers. The old theory that victory meant the destruction of the hostile main army, is untenable. Armies themselves can be disregarded by air power if a rapid strike is made against the opposing centers . . . .

As a result of his writings, Mitchell would have a profound effect on the development of air doctrine, especially among the instructors and students at the Air Corps Tactical School.

The Air Corps Tactical School (ACTS), located first at Langley Field, Virginia, and then Maxwell Field, Alabama, was the institution where Air Corps officers contemplated, developed, and taught air power doctrine. The instructors focused on the offensive nature of air warfare aimed at the vital centers (industrial web) of an enemy's industrial complex. They felt the destruction of this complex would wreck the enemy nation's capacity to sustain normal day-to-day activities which, in turn, would destroy its will and capability to wage war. Based on this concept, the Air War Plans Division, an air staff agency consisting of ACTS graduates, developed the war plans (AWPD-1 and later AWPD-42) with which the Army Air Corps entered and fought World War II.

Finally, the interwar period was punctuated by technological development. The Great Depression slowed the five-year expansion plan mandated by the Air Corps Act of 1926, but important gains in the development and acquisition of new bomber aircraft occurred nonetheless. The first of these were the Boeing B-9 and Martin B-10, both of which were twin-engine, all-metal monoplanes with retractable landing gear. Almost as fast as the best American pursuit planes of the period, the B-9 and B-10 raised the hopes of air power advocates. However these aircraft were not capable of accomplishing the strategic bombing doctrine.

The Air Corps specified a multi-engine bomber capable of carrying a 2,000 pound bomb load over a range of 1200 miles at a speed of 200 miles per hour or better. Boeing developed the B-17, a four-engine bomber with a wing span of 103 feet and a service ceiling of 30,000 feet, which was capable of carrying a bomb load of 2,500 pounds over a distance of 2,260 miles at a top speed of 250 miles per hour. After flying nonstop 2,100 miles from Seattle to Dayton at an average speed of 232 miles per hour in an August 1935 test flight, the

B-17 became the symbol of strategic air power for the Air Corps. Although the B-29 and B-36 would be developed later, the Air Corps now had the machine to try to implement its doctrine during World War II.

Innovation during the interwar period was not just focused on military aviation. Due to advances in aircraft technology, altitude, speed, distance, and endurance records were set. The Question Mark, an airplane flown by Major Carl Spaatz, Captain Ira Eaker, and Lieutenant Elwood Quesada, set an endurance record by staying aloft for over 150 hours. The airplane was refueled 43 times, taking on 5,660 gallons of fuel. While significant, it didn't compare to Charles A. Lindbergh's solo flight across the Atlantic. Lindbergh became the first person to fly solo, non-stop across the Atlantic. The trip took 33 1/2 hours!

While the interwar period was marked by technological developments in aircraft design and continued controversy as the Air Service made gains in its drive for independence from the Army, the United States remained unprepared for World War II. Upon entry into World War II the Air Corps had only 14 B-17s!

## **World War II**

On 1 September 1939, the Second World War opened with the Nazi invasion of Poland. Using the blitzkrieg ("lightening war"), the Germans overcame Polish resistance in thirty days. The Nazi war-machine continued its drive across Europe and by July 1940, Norway, Holland, Denmark, Belgium, and France had also fallen victim to Germany. While Britain stood alone against a Nazi-dominated continent, the United States would not officially enter the war for another year and a half, when the Japanese attacked Pearl Harbor.

On 8 December 1941, President Roosevelt asked Congress to “declare that, since the unprovoked and dastardly attack by Japan on Sunday, December 7, a state of war existed between the United States and the Japanese Empire.” On the morning of 11 December 1941, Germany and Italy declared war against the United States and the President told Congress, “The long known and the long expected have taken place. The forces endeavoring to enslave the entire world now are moving toward this hemisphere.” Congress recognized the state of war with Germany and Italy that same day. Thus, the United States found itself engaged in a two-front war.

Based upon agreements with the British, it was decided that the United States would wage a defensive campaign in the Pacific, while fighting offensively against the Germans, who were considered the stronger, more dangerous enemy. The Army Air Forces (AAF) entered the fray with the AWDP-1 plan to paralyze German war production and cripple her ability and will to wage war by attacking selected targets from electric, transportation, synthetic petroleum, and aviation industries. When German fighters proved to be more effective than anticipated and the German submarine campaign took a heavier toll than expected on Allied shipping, President Roosevelt, in August 1942, issued a call for “complete air ascendancy over the enemy.” The result was AWPD-42, a newly devised plan updating the requirements and plans for the Army Air Forces to carry out its operations. The basic objective of AWPD-1 to destroy German war-supporting industries and economic systems remained, however submarine yards, aluminum plants, and synthetic oil storage locations were added to the target set.

The Chief of the AAF, Lieutenant General Henry H. Arnold, appointed Major General Carl Spaatz to command the U.S. Eighth Air Force—the first American strategic bomber force in Europe. When Spaatz left England to take charge of

the AAF forces in North Africa, Brigadier General Ira Eaker assumed command. It was under his command that the Eighth Air Force B-17 attacks began on 17 August 1942 with raids against the railroad marshaling yards at Rouen and Sotteville, France. Twelve B-17 squadrons and four RAF Spitfire squadrons took part; losses were very light—two Spitfires and no B-17s. This experience, added to the subsequent missions flown, led the AAF leaders to gain a false sense of confidence in their doctrine of high-altitude, daylight, precision bombing. American air leaders were convinced that tight bomber formations and heavy defensive armament would protect the Boeing B-17 Flying Fortress and Consolidated B-24 Liberator during daylight operations. With deeper penetrations into the continent and Germany, the aircrews would face formidable opposition and suffer tremendous losses.

In 1943, the Americans and British began joint strategic bombardment operations against Germany. This effort, known as the Combined Bomber Offensive (CBO), combined round-the-clock operations with American bombing by day and British bombing by night to keep the pressure on Germany. The initial American bomber assaults deep into Germany met with disaster. On 14 October 1943, the AAF launched two groups of B-17s to attack the ball bearing plants of Schweinfurt, Germany. Twenty-eight of the B-17s were knocked out of the sky before the formation reached its target. Another 32 fell victim to the Luftwaffe on the egress back to their English bases. Additionally, 17 B-17s sustained heavy damage and were eventually declared lost, while another 121 sustained less serious damage. Of the original 291 aircraft, 198 had been damaged or destroyed. This raid, combined with the losses absorbed on three other raids during the same week, cost 148 bombers and their crews. The AAF would strike no more targets deep in Germany for the rest of 1943.



AAF leaders, despite these tremendous losses, were not ready to discard the doctrine of strategic bombardment. General Henry H. Arnold, Chief of the Army Air Forces, felt that a fighter with sufficient range to escort the B-17s and B-24s into the heart of Germany was the answer to the attrition problem. Eighth Air Force attempted to increase the range of its available fighters, but it wasn't until the arrival of the P-51 Mustang, fitted with drop tanks, that the tide turned. The P-51 could escort the bombers to the farthest reaches of Germany.

The Eighth resumed its raids in late February 1944, with what is known as "Big Week." The attacks launched during Big Week were aimed at the German aircraft industry. The attacks continued into the Spring and by April the results were obvious: the American fighters and bombers had gained control of the air. Air superiority was vital both for the Allies' success and for relatively low casualties during the D-Day invasion. Because of this hard-won air superiority, American and British bombers were able to attack virtually any target in Germany for the rest of the war. By April 1945, the CBO had significantly hampered the German war machine.

Halfway around the world in the Pacific Theater another air war was taking place. As in Europe, the AAF wanted to conduct a strategic bombing campaign against the Japanese homeland. Due to the vast territory involved, however, this campaign would have to wait until US forces could secure airfields close enough to Japan to permit B-24 operations.

The strategy employed was to have General Douglas MacArthur conduct an island-hopping campaign from Australia, while Admiral Nimitz drove the Navy straight through the middle of the Pacific, to secure islands necessary to permit the bombing operations. Prior to these operations taking place, with the Japanese gaining the upperhand, the decision was made to launch a strike on Japan. On 18 April

1942, Lt Colonel James H. Doolittle led sixteen B-25 Mitchell bombers from the USS Hornet on a raid of the Japanese mainland. Although this raid caused insignificant material damage, it boosted the sagging morale of the American people, and caused the Japanese to devote more resources to home defense. It also showcased the potential of the aircraft carrier, which became one of the premier weapons of World War II in the Pacific Theater. In June 1942, at the Battle of Midway, Navy pilots sank four Japanese carriers, crushing any hopes the Japanese had of winning the war. The Battle of Midway is considered the turning point of the war in the Pacific.

The strategic bombing campaign finally got underway in late 1944 when the Marines captured the Marianas Islands. Major General Curtis LeMay commanded the Marianas-based B-29s; it was through his direction that these Boeing Superfortresses exacted a terrible toll on the Japanese. LeMay's 21st Bomber Command conducted the fire bombing raids on Tokyo and other cities. One such raid left sixteen square miles in the center of Tokyo completely destroyed, but it was the atomic bombs of August 1945 that forced Emperor Hirohito to capitulate. On 6 August 1945, the world entered the atomic age when a B-29 named "Enola Gay" dropped the first atomic bomb, "Little Boy," on the city of Hiroshima. Three days later, "Bock's Car" dropped the second atomic bomb, "Fat Man," on Nagasaki. On 14 August 1945 Japan surrendered to end World War II.

The unsung heroes of the Army Air Forces during World War II were the Tuskegee Airmen and the Women's Air Force Service Pilots (WASPs).

The "Tuskegee Airmen" under the command of Colonel Benjamin O. Davis, were a group of 450 Fighter Pilots trained at the Tuskegee Institute in Alabama. They fought in the aerial war over North Africa, Sicily and Europe, flying in

succession, P-40, P-39, P-47, and P-51 type aircraft. The gallant men flew 15,553 sorties and completed 1,578 missions with the 12th Tactical and 15th U.S. Army Air Force. In the process they distinguished themselves as the premier fighter group of the war. These courageous airmen came home with 150 Distinguished Flying Crosses, Legions of Merit, and Red Stars of Yugoslavia.

The WASPs were led by Jacqueline Cochran. Much like "Rosie the Riveter" made it possible for the young, able-bodied men to fight for their country, these women freed male aviators for combat duty. The WASP's main mission was to ferry aircraft such as the B-17, B-26, P-51, P-47, and C-54 to Europe: however, they flew many other types of missions such as target towing, smoke laying, radio control flying, basic and instrument instruction, test flight, and administrative flying. By the war's end, these women had flown approximately 60 million miles in service to their country.

## **Post World War II**

In the aftermath of World War II, President Harry S. Truman faced a world situation that seemed to threaten American national security at every turn and that demanded a posture of military preparedness that increasingly relied on strategic air power as its backbone. Despite Truman's concerns, the United States emerged after the war as the most powerful country on earth. In terms of economic strength, natural resources, industrial power, technological capability, and military might, the U.S. stood clearly superior to its closest rival, the Soviet Union.

Immediately following World War II, the struggle for an independent air arm resumed as Congress began a reconsideration of the nation's defense structure. Since the United States was the only country in the world that had the

expertise to construct and deliver atomic weapons, some leaders felt that all that was needed for defense was a strategic bomber force capable of delivering these weapons. In 1946, the Strategic Air Command (SAC) was formed to provide this capability. General Curtis LeMay assumed command in 1948 and began to build and organize the most destructive air fleet the world had ever seen. However, the debate concerning an independent air force continued, and on 26 July 1947, after considerable prodding by President Truman, Congress passed the National Security Act. The Act established the Department of Defense and created the Air Force as one of three coequal services. Executive Order 9877, signed the same date, outlined the main functions of the three services. Specific Air Force functions assigned were: air operations including joint operations; gaining general air supremacy; establishing local air superiority; responsibility for the strategic air force and strategic air reconnaissance; airlift and support for airborne operations; air support to land and naval forces; air transport except for that furnished by the Navy; and supplying the means to coordinate air defense among the services. Billy Mitchell's Air Service had finally gained its independence.

America had busied itself "organizing for defense" because the first chills of the Cold War were being felt in Europe. By the end of World War II, the Soviet Union had occupied Eastern Europe, including the zone of East Germany and Berlin. In 1948, in a test of wills, the Soviets blockaded Berlin, cutting off all rail, barge, and road traffic leading to Berlin from Germany's Western-occupied zones. The only remaining avenue was air traffic. The Allies had been guaranteed three twenty-mile-wide air corridors into the city, and the decision was made to resupply the city by air transport.

What came to be known as the Berlin Airlift began on 26 June 1948, when Air Force C-47s lifted off from Wiesbaden

Air Base with a cargo of milk, flour, and medicine bound for Berlin's Tempelhof Air Base. By 20 July, 1954, C-54s and C-47s airlifted 1,500 tons of supplies a day into Berlin; in the final three months of the operation, 8,000 tons were moved daily. By December, "Operation Vittles" planes flew around the clock to bring supplies to Berlin. At the height of the joint British-American effort, air traffic and other operational procedures were fine-tuned to the point where a rate of one aircraft movement every 31 seconds was achieved in Berlin.

The airlift continued through a long, cold winter and a dismal, rainy spring. Finally, on 12 May 1949, the Soviets lifted the blockade. The West had won the first encounter of the Cold War, and the Berlin Airlift had accomplished what few thought possible: it had supplied an entire city with its basic necessities completely by air.

### **The Korean War**

On 25 June 1950, the Cold War turned hot when North Korean troops, supported and supplied by the Soviets, crossed the 38th Parallel into South Korea. President Truman immediately sent aid and requested United Nations support to stop the North Korean aggression. As the North Korean juggernaut threatened to push US forces completely off the peninsula, the assets of the Far East Air Force (FEAF) were committed to assist the ground forces. By slowing the North Korean advance and flying in critically needed men and supplies, the Air Force provided General MacArthur the opportunity to establish the Pusan Perimeter on the southern tip of the Korean peninsula. General Ridgway, who replaced MacArthur on 11 April 1951, later wrote of this phase of the war:

As for our airmen, without them the war would have been over in 60 days with all Korea in Communist hands . . . the fliers of the Air Force, the Navy, and the Marine Corps . . . managed to eliminate the North Korean Air Force in the battle, destroyed much of the NKPA armor, and transported critically needed men and supplies to spots of greatest danger.

The war continued to ebb and flow over a three-year period, with the Air Force flying counterair, interdiction, close air support, strategic bombing, and transport missions in support of the ground forces. On 27 July 1953, the armistice was signed at Panmunjom ending the war, but establishing an uneasy peace along the 38th Parallel.

The Korean War saw the first full introduction of the jet fighter by both participants with the MIG-15 and F-80, F-84, and F-86 aircraft. The MIG-15 was technologically the superior aircraft. The MIG-15 had a much higher airspeed at altitudes above 30,000 feet, was much lighter, had a higher climb rate, and a much smaller turn rate. However, the F-86 Sabrejet more than held its own. The advantage the Sabre enjoyed was the superior training and aggressiveness of its pilots. Despite the MIG's advantages, 792 of them were destroyed in air-to-air combat with F-86s, versus only 78 lost F-86s, a tribute to the quality of the pilots who flew the Sabrejets.

### **Strategic Force Development**

Despite the fact that the majority of missions flown during the Korean Conflict were "classic" tactical missions, the lessons learned were discarded in favor of strategic nuclear force development. Typical of the thinking of the period was Thomas K. Finletter, Secretary of the Air Force, who stated, "The

Korean War was a special case and air power can learn little from there about its future role in U.S. foreign policy.” The tensions between the United States and the Soviet Union intensified in the wake of the Korean War. Many Americans believed that the Soviets had a master plan to dominate the world. This fear led to the expansion of the defense establishment and development of weapons of such great power and range that they would deter the Soviets from expanding and exporting their Communist ideology. Thus, money was funneled to the Strategic Air Command for nuclear weapons development, while the tactical needs of the Air Force were overlooked.

Strategic weapons developed to counter the Soviet Union included the B-52 Stratofortress, capable of delivering nuclear bombs on the Soviets, and the KC-135 Stratotanker, which would provide the air refueling support to the attacking B-52s. The intercontinental ballistic missile (ICBM) was also developed during this time. With refinements made during the next thirty years, the ICBM changed forever the nature of military technology, national strategy, and international relations. The ICBM also opened the door for the exploration and use of space for civilian and military purposes. The Atlas, Thor, Titan I and II, Minuteman I, II, III, and Peacekeeper missile systems were developed and fielded throughout this thirty-year period to complement SAC’s bomber force, as well as the Navy’s missile launching submarines. This nuclear Triad (bombers, submarines, and missiles) still forms the backbone of the American strategic deterrent forces today.

## **The Vietnam War**

The competition between the Soviet Union and the United States, while often intense during the Cold War period, recognized certain limits. The fear of nuclear war loomed large

in both nations, thus each side used restraint during conflicts to limit the scale of war. The restraint each used during the Korean War would again be necessary in Vietnam.

The major air campaigns conducted during the Vietnam War were Rolling Thunder, Linebacker I, and Linebacker II. Rolling Thunder, conducted from February 1965 to November 1968, was an interdiction campaign designed to stem the flow of men and supplies into South Vietnam. By employing a “graduated” use of force against selective targets, the Johnson Administration hoped to drive the North Vietnamese to the bargaining table. Actually, the piecemeal nature of the air effort didn’t force the North Vietnamese to the negotiating table, but instead allowed them to build up their air defense network and continue fighting. President Johnson canceled Rolling Thunder on 1 November 1968 when it became obvious it wasn’t having the desired effect.

Peace talks did open in Paris in January 1969 and continued without effect until March 1972, when North Vietnam launched a major offensive into South Vietnam. In April 1972, President Nixon authorized the resumption of the air effort against the North. This bombing campaign, Operation Linebacker I, was more intense and more effective than the earlier Rolling Thunder Operations. The main targets were North Vietnamese communications centers, road networks, railroads, bridges, military barracks, and Haiphong harbor. It was intended to cut off the movement of supplies to the North Vietnamese Army in the South and to destroy or severely limit North Vietnam’s ability to conduct war. The effort seemed to have the intended effect when the North seemed willing to continue talks; however, by 20 November, President Nixon realized the Communists were stalling. Nixon decided to continue attacking the North in December 1972; in Linebacker II operations.

Unlike the previous Linebacker campaign, Linebacker II used a large number of B-52s to attack the North’s will to resist



and force Hanoi to negotiate in good faith. The “Christmas Offensive,” the first true strategic bombing campaign directed against the North, quickly brought the North Vietnamese to the negotiating table. By January 1973, a cease-fire agreement was reached, and prisoner-of-war (POW) exchanges began in February. In retrospect, although the United States did not accomplish its political objectives in the Vietnam War, the Air Force once again proved it was equal to the task, contributing significantly to the war effort. In reaction to the war in Vietnam, the USAF developed new weapon systems, methods of ordnance delivery, and training programs. These lessons were applied with tremendous success in 1991 against the rogue leader and military of Iraq.

## **Operations Desert Shield and Desert Storm**

*by Lieutenant Colonel Jerome V. Martin*

*Class of 1972*

The Iraqi invasion of Kuwait on 2 August 1990 stimulated a vigorous multinational reaction. Led by the United States, the coalition response highlighted the capabilities of modern air power. The USAF and air assets from the other U.S. armed services and the other nations in the coalition were the key to the initial reaction to the invasion and to the successful liberation of Kuwait. Operation Desert Shield, from the President’s decision to commit U.S. forces on 5 August 1990 to the initiation of combat on 17 January 1991, and Operation Desert Storm are spectacular examples of the potential of air power.

During the logistical buildup, the planners under the direction of General H. Norman Schwarzkopf, the Commander of U.S. Central Command, began developing an offensive campaign plan for the liberation of Kuwait. This plan was based on the clear advantage that the coalition enjoyed in air power. USAF planners developed a four phase air campaign plan to guide the air operations.

The objective of the air campaign was to paralyze the Iraqi government and its military through an intense aerial offensive. The initial phase of the campaign was aimed at strategic targets in the heart of Iraq. These included key government offices; military headquarters; the command, control, communications and intelligence system; nuclear, biological, and chemical production and storage facilities; offensive delivery systems, such as ballistic missiles; electric and petroleum production and distribution capabilities; and the Iraqi Air Force. This phase also included the suppression of the Iraqi national air defense system.

The second planned phase was designed to suppress the Iraqi air defenses in the Kuwait Theater of Operations (KTO). The third stage was the isolation and destruction of the Iraqi forces in the KTO. This stage was designed to reduce the combat capability of the potent Iraqi ground forces before the final coalition ground offensive. The last phase of the air plan was to provide support for the ground campaign in the liberation of Kuwait.

By mid-January, the coalition had over 2,600 aircraft in the area of operations, including over 1,900 from the United States. The USAF contribution was 700 combat and over 800 support aircraft. The coordination of this large force was important to its success, and this was done through a centralized command and control system that was directed by USAF Lt Gen Charles A. Horner, the Joint Force Air Component Commander (JFACC). His headquarters produced a daily air tasking order (ATO) that provided assigned targets and missions to all of the aircraft flying in the theater.

The air campaign was kicked off in the early morning hours of 17 January 1991 (16 January in the U.S.). The initial blows were struck by an Air Force-Army helicopter team that hit Iraqi early warning radar sites. These attacks were quickly followed by F-117A and cruise missile air and sea launched strikes on

additional air defense targets, key command and control facilities, and other important strategic targets. Noteworthy in this first wave was the highly successful first combat use of stealth aircraft and cruise missiles in a high-threat environment. Additionally, some of the cruise missiles were fired from B-52s flying from the continental United States, an example of the global capability of air power.

The coalition air assault rendered the Iraqi surface-to-air missile (SAM) defense system ineffectual. This allowed the coalition to fly at medium altitudes and to deliver weapons from above the intense Iraqi anti-aircraft artillery (AAA) fire. With air superiority, indeed air supremacy, from the earliest days of the air campaign, the coalition maintained almost continuous pressure on the Iraqi military throughout the war.

The air campaign achieved similar success against the Iraqi military forces in the KTO. Air operations effectively isolated the KTO from its supply base in central Iraq. Additionally, the air attacks accomplished their objectives of reducing the combat capability of the ground forces and deflating the morale of the soldiers. At the start of the ground campaign, General Schwarzkopf estimated that the overall combat effectiveness of the Iraqi ground forces had been reduced by fifty percent. The air campaign destroyed an estimated 1,800 tanks, 1,000 armored vehicles, and 1,500 artillery pieces. Units that experienced air attacks suffered desertion rates of twenty to forty percent before the coalition ground offensive began. Additionally, the low morale was reflected in the willingness of many Iraqi soldiers to surrender without fighting. On 24 February 1991, the first day of the coalition ground offensive, over 8,000 troops surrendered, with that number growing to 86,000 during the remaining three days of the war. The stunning ground victory, at the cost of less than two hundred coalition lives, owed much to the foundation laid by the air campaign.

Operation Desert Shield and Desert Storm and the successful liberation of Kuwait clearly illustrated modern airpower's inherent strengths of range, speed, flexibility, and ability to concentrate firepower on specific targets. The air offensive was possible because of the excellent conditions for air operations in the theater, the superb Saudi base infrastructure, and the extensive preparations that were conducted in the months prior to combat with the logistical buildup, training, and planning. Additionally, for the USAF the success of both operations rested on a strong force structure that had the best available technology, a solid logistical base, and professional, well trained, motivated personnel. Good airplanes and weapons, but, even more important, good people—leaders, planners, fighters, and supporters were the key to victory in the desert.

### **Space: The New High Ground**

*by Captain Robert D. Critchlow*

When many people think of warfighting in space, they visualize the starship Enterprise or the battlestar Galactica. While military operations in space are less glamorous in reality, they have become absolutely vital to defending our nation. There is a long historical relationship between the military and those who wanted to advance space exploration. The road to advancing manned and unmanned space systems from experimental novelties has been long and costly. However, recent conflicts have highlighted the importance of space systems as a technological trump for the United States against potential adversaries.

Military support was key to advancing the exploration of space. Dr. Robert H. Goddard was responsible for developing the first liquid fueled rocket in the 1920s. Yet many have

forgotten that he received his initial funding from the military. He developed a precursor to the bazooka, as well as Jet Assisted Take-Off (JATO) rockets. Dr. Werner von Braun got his start with the German military during World War II and developed the V-2 rocket. When he emigrated to the United States after the war, he worked with our rocket program, and his work culminated with the Saturn V rocket that sent men to the moon.

Early in the space age, American supremacy was in grave jeopardy. The launch of Sputnik, the first artificial earth orbiting satellite, by the Union of Soviet Socialist Republics on 4 October 1957, threw the nation into a panic. The Russians soon followed with the first animal in space, and then the first man in space, Cosmonaut Yuri Gagarin. The political challenge these events presented and the military capabilities they indicated spurred the United States into action. The Air Force hastened development and deployment of our first operational inter-continental ballistic missile (ICBM), the Atlas. The Atlas booster was followed by the larger Titan system. ICBMs have formed the backbone of the U.S. nuclear deterrent since the early 1960s, and both the Atlas and Titan boosters still serve as expendable launch vehicles for our satellites today.

Military involvement was also critical to the U.S. manned space flight program, which also received increased emphasis after Sputnik. In fact, all of the original seven Mercury program astronauts came from the military, mostly from the test pilot community. Among them was Lt Col John Glenn, USMC, who was the first American to orbit the earth. Other flights of the single-seat Mercury program tested man's ability to survive in space, a first step on our way to fulfill President John F. Kennedy's challenge, "I believe that this Nation should commit itself to achieving the goal, before the decade is out, of landing a man on the moon and returning him safely to earth."

Project Gemini was a further stepping stone on our way to the moon. This series of two-man capsule space flights tested our ability to work in space. In particular, this program tested techniques for rendezvous, docking, and extra-vehicular activity. Among the highlights was the first American spacewalk, by astronaut Maj Edward H. White, II, USAF.

Project Apollo represented the apex of our manned space flight program. The first three-man Apollo missions tested the command and lunar modules in flight. However, Apollo XI fulfilled President Kennedy's challenge. Lt Col Michael Collins, USAF, orbited above in the command module Columbia, while Neil Armstrong and Col Edwin "Buzz" Aldrin, USAF, landed on the moon in the lunar module Eagle. On 20 July 1969, Armstrong became the first human to step on another world, saying "That's one small step for man; one giant leap for mankind." Six other Apollo crews landed on the moon, but the adventure was costly. Three astronauts, Lt Col Edward H. White, II, USAF; Lt Col Gus Grissom, USAF; and LCDR Roger Chaffee, USN; were killed in a launch pad fire on Apollo 1, while the Apollo 13 crew had to abort their mission midway to the moon when an explosion destroyed their service module, with its life support systems. Since the Apollo 17 mission in December 1972, men have not returned to the moon.

The thoroughly tested Apollo vehicle continued in use during the 1970s. It provided transport of crews to Skylab, the first American space station. Three separate crews studied the effects of long duration space flight on the human body. In addition to their record-setting missions they also conducted an ambitious scientific program, which included earth observation and solar astronomy. The Apollo vehicle's last mission was a political breakthrough, the Apollo-Soyuz Test Project, in 1975. This joint U.S.-Soviet mission tested the lessening of tensions between our two countries, through astronaut/cosmonaut and technology exchanges that led to a joint mission in space. Americans would not fly in space again for six years.

After a long development period plagued by budget cuts and technical delays, John Young and Capt Robert Crippen, USN, piloted the first space shuttle, Columbia, into orbit on 12 April 1981. The shuttle was intended to provide low cost access to space because of its large payload capacity and its reusability. Unfortunately, the nearly monthly launching of space shuttle missions lulled NASA and the public into complacency. Manned spaceflight is still not only costly and complex, but deadly. On 28 January 1986, we were reminded of the dangers of manned spaceflight when the space shuttle Challenger exploded 117 seconds after launch, killing its crew of six astronauts and one civilian. Since then, many payloads have shifted to expendable launch vehicles, while the shuttle mainly carries payloads that require a "man-in-the-loop."

Though less dramatic than the space shuttle, unmanned systems in space or sensors on the ground, provide the backbone of our Defense Department space effort. Most of these programs are managed by the Air Force Space Command, which formed in 1982 as the primary DoD agent for space. Ballistic Missile Warning systems, such as satellites or radars, provide warning to the North American Aerospace Defense Command headquarters in Cheyenne Mountain of missile attacks against the United States. As other nations develop ballistic missiles or weapons of mass destruction, this mission becomes even more critical. Closely related is the Space Surveillance mission, which uses radars and telescopes to detect and catalog all objects in space and attempt to identify those which are threats.

Operation Desert Storm illustrated the importance of Space Support missions, particularly Satellite Operations. The NAVSTAR Global Positioning System provided three-dimensional navigation data so that soldiers could travel in the featureless desert and aircraft could bomb within feet of their target. The Defense Meteorological Satellite Program provided

weather data that permitted our aircraft to continue combat sorties despite the worst weather in Iraq in years. The Defense Satellite Communications System provided communications for commanders in the field and the National Command Authorities in a part of the world that even lacked telephone lines. Other systems provided warning of SCUD missile launches that threatened our troops. Of course, Space Lift systems, such as the Delta II medium launch vehicle or the Titan IV heavy lift vehicle, were needed months or years earlier to place these systems in orbit.

Space is the new high ground. It reduces the fog and friction of war by letting us see things the enemy cannot. It lets us control the timing and tempo of operations by letting us communicate better and think faster by winning the information war. This means that space saves soldiers' lives. General Merrill A. McPeak, Chief of Staff of the Air Force, recognized the importance of space by giving it equal importance with airpower in the Air Force mission statement: "Our mission is to defend the United States through the control and exploitation of the air and space."



## History of the Air Force Song

The only official history of the Air Force Song can be found in a copy of a script which was used on radio station WRC broadcast on February 23, 1944. Captain Alf Heiburg, leader of the Army Air Corps Band, interviewed Captain Robert Crawford, composer of the "Army Air Corps Song," during this broadcast. Captain Crawford related the story, retold here:

In 1939, when he was a civilian pilot, Robert Crawford was asked by a friend to enter a song contest. While flying his plane to Philadelphia, he composed a simple tune. The next day he wrote lyrics that, when combined with the tune, became what was known as the "Army Air Corps Song." The United States Army Band made the first recordings of the song in 1939. It was later renamed the Army Air Forces Song, and eventually the Air Force Song.

# The Air Force Song

## I

Off we go into the wild blue yonder,  
Climbing high into the sun;  
Here they come zooming to meet our thunder,  
At'em boys, giv'er the gun!  
Down we dive spouting our flame from under,  
Off with one hell-uv-a-roar!  
We live in fame or go down in flame  
Nothing'll stop the US Air Force!

## II

Minds of men fashioned a crate of thunder,  
Sent it high into the blue;  
Hands of men blasted the world asunder,  
How they lived God only knew!  
Souls of men dreaming of skies to conquer  
Gave us wing, ever to soar.  
With Scouts before and bombers galore,  
Nothing can stop the US Air Force!

## III

Here is a toast to the host of those who love the vastness  
of the sky,  
To a friend we send the message of his brother men  
who fly.  
We drink to those who gave their all of old,  
Then down we roar to score the rainbow's pot of gold.  
A toast to the host of men we boast,  
The US Air Force.

## IV

Off we go into the wild sky yonder,  
Keep the wings level and true!  
If you'd live to be a gray-haired wonder,  
Keep the nose out of the blue!  
Flying men guarding our nation's borders,  
We'll be there followed by more.  
In echelon we carry on!  
Nothing'll stop the US Air Force.

# The Air Force Hymn

## I

Lord, guard and guide the men who fly  
Through the great spaces of the sky;  
Be with them traversing the air  
In darkening storms or sunshine fair.

## II

You who support with tender might  
The balanced birds in all their flight,  
Lord of the tempered winds, be near,  
That, having you, they know no fear.

## III

Control their minds with instinct fit  
Whene'er, adventuring, they quit  
The firm security of land;  
Grant steadfast eye and skillful hand.

## IV

Aloft in solitudes of space,  
Uphold them with your saving grace.  
O God, protect the men who fly  
Through lonely ways beneath the sky.

## Air Force Days

**March 16, 1926**—Dr. Robert H. Goddard launched the first liquid fueled rocket in history. It flew 184 feet, and started the age of Modern Rocketry.

**April 12, 1981**—The first Space Shuttle Orbiter, OV-102 Columbia, manned by John Young (commander) and Robert Crippen (pilot) was successfully launched by NASA from Cape Canaveral.

**April 18, 1942**—Led by Lt Colonel James H. Doolittle, 16 B-25s took off from the carrier Hornet in the first raid on Tokyo. Although all 16 planes were lost, 14 crews came through alive. Lt Colonel Doolittle was awarded the Medal of Honor, and the other flyers received the Distinguished Flying Cross.

**May 5, 1961**—Commander Alan B. Shepard, Jr., USN, became the first US astronaut to enter space. His Project Mercury capsule, "Freedom 7," was boosted from Cape Canaveral, Florida, by a Mercury Redstone (MR-3) rocket to a height of 115 miles. The flight lasted 14.8 minutes, traveled 302 miles, and reached a maximum speed of 5,000 mph.

**May 12, 1949**—The Soviet blockade of Berlin was lifted, bringing to a close the Berlin Airlift and signifying a great moral victory for the Western Powers. During the 462 days of "Operation Vittles" that preceded the end of the airlift on September 30, 1949, US planes had officially carried 1,783,826 tons of supplies in 277,262 flights. The airlift demonstrated the importance of airpower as an instrument of national policy.

**July 20, 1969**—Fulfilling President Kennedy's statement of national objective, the US landed the first manned space vehicle on the moon at 4:17:41 (EDT). The Lunar Module, named Eagle, carried NASA Commander Neil A. Armstrong and LM pilot Colonel Edwin E. Aldrin, Jr., USAF, to the surface while Lt Colonel Michael Collins, USAF, orbited in the Command and Service Module, named Columbia. At 10:56:20 (EDT) Astronaut Armstrong became the first man to step on the moon.

**July 26, 1947**—The National Security Act became law. The law provided for the establishment of the third military department, the Air Force, and the National Military Establishment, headed by a civilian Secretary of Defense, for unified direction of the Services.

**August 6, 1945**—The first atomic bomb was dropped on Hiroshima, Japan. The bomb, nicknamed "Little Boy," was delivered by the B-29 "Enola Gay," under the command of Lt Colonel Paul W. Tibbits, Jr.

**August 29, 1975**—One of the original Tuskegee Airmen, Daniel "Chappie" James pins on his fourth star and becomes commander of North American Aerospace Defense Command (NORAD). General James becomes the first black officer to achieve the rank of four-star general.

**September 18, 1947**—The initiation of Executive Order 9877 defined the roles and mission of the Air Force. Although the National Security Act was passed on July 16, its effective date was September 18 when W. Stuart Symington was sworn in as the first Secretary of the Air Force. On September 26, General Carl A. Spaatz was sworn in as the first Air Force Chief of Staff.

**September 28, 1924**—Completion of the first around-the-world flight in aviation history. Four Douglas biplanes, under the command of Major Frederick L. Martin, left on the 26,350-mile journey on April 6. After 175 days, 363 hours flying time, two planes returned under command of Lieutenant Lowell H. Smith.

**October 1, 1942**—The first jet flight by an American aircraft. The plane was the XP-59A built by Bell Aircraft Corporation with two General Electric I-1A turbojets mounted beneath the wings close to the fuselage. During its first flight of 30 minutes, the plane approached 400 mph.

**October 14, 1947**—On this date, the Bell X-1 became the first piloted plane to break the speed of sound. It was launched from a B-29. With Captain Charles E. Yeager as pilot, the plane reached a height of 70,140 feet in 2 minutes and 30 seconds of powered flight. Captain Yeager named the plane “Glamorous Glennis” after his wife.

**November 8, 1950**—First all jet aerial combat in history. Lieutenant Russel J. Brown in an F-80 shot down a Russian MiG-15 over North Korea.

**December 17, 1903**—The Wright brothers, Orville and Wilbur, made the first sustained, controlled, powered flights from Kill Devil Hill, Kitty Hawk, North Carolina. The fourth and longest flight covered a distance of 852 feet in 59 seconds. Three days earlier, on the 14th they had made the first powered flight lasting 3.5 seconds for a distance of 105 feet.

## **Air Force Specialty Badges**

New Air Force specialty badges were phased in beginning 1 Jan 95. With the new badges everyone will be qualified to wear a badge. Enlisted and officers will wear the same badges, however upgrade to a star and wreath will be different.

Enlisted members will be awarded their badge at the completion of their initial training. A star will be added when seven level training is complete. The wreath will be added after finishing the Senior NCO Academy.

Officers will receive their initial badge at the completion of technical training. Seven years from becoming fully qualified they will receive a star and at fifteen years will receive a wreath.





Pilot



Navigator/Observer



Enlisted Aircrew



Astronaut



Flight Surgeon



Flight Nurse



Officer Aircrew Member



Acquisition & Financial Mgt



Air Traffic Control



Band



Chaplain Service Support



Civil Engineer



Command & Control



Communications & Information



Explosive Ordnance Disposal



Force Protection



Historian



Information Management



Intelligence



Judge Advocate



Logistics



Maintenance



Manpower & Personnel



Meterologist



Operations Support



Parachutist



Paralegal



Public Affairs



Services



Space/Missile



Supply/Fuels



Transportation



Weapons Director



Biomedical Sciences  
Corps



Dental Corps



Enlisted Medical



Medical Corps



Medical Service  
Corps



Nurse Corps



Missile



Missile with  
Operations Designator



Jewish Chaplain



Christian Chaplain



Buddhist Chaplain



Muslim Chaplain

# Employing Air and Space Power

(From Air Force Doctrine Document 1, September 1997, Chap 3)

The Air Force's basic functions are the broad, fundamental, and continuing activities of air and space power.

## Air and Space Power Functions

**Counterair**—consists of operations to attain and maintain a desired degree of air superiority by the destruction or neutralization of enemy forces.

✪ *Offensive Counterair (OCA)*—This function consists of operations to destroy, neutralize, disrupt, or limit enemy air and missile power as close to its source as possible and at a time and place of our choosing.

✪ *Defensive Counterair (DCA)*—DCA concentrates on defeating the enemy's offensive plan and on inflicting unacceptable losses on attacking enemy forces.

**Counterspace**—involves those operations conducted to attain and maintain a desired degree of space superiority by the destruction or neutralization of enemy forces.

✪ *Offensive Counterspace (OCS)*—OCS operations destroy or neutralize an adversary's space system or the information they provide at a time and place of our choosing through attacks on the space, terrestrial, or link elements of space systems.

✪ *Defensive Counterspace (DCS)*—DCS operations consist of active and passive actions to protect our space-related capabilities from enemy attack or interference.

**Counterland**—Counterland involves those operations conducted to attain and maintain a desired degree of superiority over surface operations by the destruction or neutralization of enemy surface forces.

✪ *Interdiction*—is a form of air maneuver. It consists of operations to divert, disrupt, delay, or destroy the enemy's surface military potential before it can be used effectively against friendly forces.

✪ *Close Air Support (CAS)*—consists of air operations against hostile targets in close proximity to friendly forces; further, these operations require detailed integration of each air mission with the fire and movement of those forces. CAS provides direct support to help friendly surface forces carry out their assigned tasks.

**Countersea**—functions are an extension of Air Force functions into a maritime environment.

**Strategic Attack (SA)**—is defined as those operations intended to directly achieve strategic effects by striking at the enemy's centers of gravity (COGs). These operations are designed to achieve their objectives without first having to necessarily engage the adversary's fielded military forces in extended operations at the operational and tactical levels of war.

**Counterinformation**—seeks to establish information superiority through control of the information realm.

✪ *Offensive Counterinformation (OCI)*—The purpose is to disable selected enemy information operations.



★ *Defensive Counterinformation (DCI)*—includes those actions that protect our information, information systems, and information operations from the adversary.

**Command and Control (C2)**—includes both the process by which the commander decides what action is to be taken and the system which monitors the implementation of the decision.

**Airlift**—is the transportation of personnel and material through the air and can be applied across the entire range of military operations in support of national objectives.

★ *Intertheater airlift* provides the air bridge that links theaters to the CONUS and to other theaters, as well as airlift within the CONUS.

★ *Intratheater airlift* provides the air movement of personnel and material within a CINC's area of responsibility.

★ *Operational support airlift* is airlift provided by assets that are an integral part of a specific Service, component, or major command (MAJCOM) and that primarily support the requirements of the organization to which they are assigned.

**Air Refueling**—is an integral part of US airpower across the range of military operations.

**Spacelift**—projects power by delivering satellites, payloads, and material into or through space. During a period of increased tension or conflict, the spacelift objective is to launch or deploy new and replenishment space assets as necessary to achieve national security objectives.

**Special Operations Employment**—is the use of airpower operations (denied territory mobility, surgical firepower, and special tactics) to conduct the following special operations functions: unconventional warfare, direct action, special reconnaissance, counter-terrorism, foreign internal defense, psychological operations, and counterproliferation.

**Intelligence**—provides clear, brief, relevant, and timely analysis on foreign capabilities and intentions for planning and conducting military operations.

**Surveillance**—is the function of systematically observing air, space, surface, or subsurface areas, places, persons, or things, by visual, aural, electronic, photographic, or other means.

**Reconnaissance**—complements surveillance in obtaining, by visual observation or other detection methods, specific information about the activities and resources of an enemy or potential enemy; or in securing data concerning the meteorological, hydrographic, or geographic characteristics of a particular area.

**Combat Search and Rescue (CSAR)**—consists of those air operations conducted to recover distressed personnel during wartime or military operations other than war (MOOTW).

**Navigation and Positioning**—is to provide accurate location and time of reference in support of strategic, operational, and tactical operations.

**Weather Services**—provided by the Air Force supply timely and accurate environmental information, including both space environment and atmospheric weather, to commanders for their objective and plans the strategic, operational, and tactical levels.

## The History of "High Flight"

"High Flight" was the fruit of a great pilot and officer who had a true talent for writing. However, many masterpieces are not simply written. They must first be inspired, and "High Flight" is no exception.

John Gillespie Magee, Jr. felt the desire to fly in an Air Force from the early days of WWII. He denied his acceptance to Yale with his parent's eventual consent and entered the Royal Canadian Air Force in October 1940 for flight training. He successfully completed training, earned his wings, and was commissioned a Pilot Officer. Magee then traveled to England where he began training in the Spitfire. In the course of this training, he was assigned to make a high altitude flight. While flying at 30,000 feet, prompted by the overwhelming ecstasy produced by the amazing serenity and awe of the moment, Magee started composing the words to his now famous poem:

"Oh! I have slipped the surly bonds of Earth  
And danced the skies on laughter silvered-wings. . ."

With this, the beginning of a great sonnet was born. Magee then formed the rest of the poem in his mind during the remainder of that flight. He memorized everything but the last line, which he added shortly after leaving the airplane on the ground and walking to his quarters. Upon finishing this flight, Magee wrote the poem on the back of a letter previously written to his parents, proclaiming that it "might interest you."

John Gillespie Magee, Jr. was killed in an aerial collision during practice maneuvers in England. He was buried among his fellow flyers. His life was that of the determined airman, and luckily, we have his poem to inspire us and remind us of him. The reader is advised to not simply read "High Flight," but rather to experience it, understand its meaning, and relish in the reality of the images it portrays.

## High Flight

by John Gillespie Magee, Jr.

Oh, I have slipped the surly bonds of earth  
And danced the skies on laughter-silvered wings;  
Sunward I've climbed and joined the tumbling mirth  
Of sun-split clouds—and done a hundred things  
You have not dreamed of—wheeled and soared and swung  
High in the sunlit silence. Hovering there  
I've chased the shouting wind along and flung  
My eager craft through footless halls of air.  
Up, up the long delirious, burning blue  
I've topped the wind-swept heights with easy grace,  
where never lark, or even eagle flew;  
and, while with silent, lifting mind I've trod  
The high untrespassed sanctity of space,  
Put out my hand, and touched the face of God.

### **Air Combat Command (ACC)**

HQ: Langley AFB, VA Established: 1 June 1992

Mission: Operates Air Force bombers and CONUS-based, combat-coded fighter and attack aircraft. Organizes, trains, equips and maintains combat-ready forces for rapid deployment and employment while ensuring strategic air defense forces are ready to meet the challenges of peacetime air sovereignty and wartime air defense.

Responsibilities: Acts as primary provider of air combat forces to the warfighting commands and as the proponent for fighter, bomber, reconnaissance, battle-management, and rescue aircraft; and command, control communications and intelligence systems. Provides nuclear forces for U.S. Strategic Command, as well as theater air forces for U.S. Geographic Major Commands. Provides air defense forces to the North American Aerospace Defense Command. Prepares combat air forces to globally implement national policy.

### **Air Education and Training Command (AETC)**

HQ: Randolph AFB, TX                      Established: 1 July 1993

Mission: Recruits, accesses, commissions, trains and educates Air Force enlisted and officer personnel. Provides basic military training, initial and advanced technical training, flying training, and professional military and degree-granting professional education. Conducts joint, medical service, readiness and Air Force security assistance training.

Responsibilities: Recall of Individual Ready Reservists, and conducts mobility and contingency tasking support to combatant commanders.

### **Air Force Materiel Command (AFMC)**

HQ: Wright-Patterson AFB, OH      Established: 1 July 1992

Mission: Advances, integrates and uses technology to develop, test, acquire and sustain weapon systems. Performs single-manager continuous product and process improvement throughout a product's life cycle. Contributes to combat superiority, readiness, and sustainability.

Responsibilities: The Air Force School of Aerospace Medicine, Air Force Test Pilot School, major product, logistics and test centers, and the Air Force Research Laboratory.

### **Air Force Reserve Command (AFRES)**

HQ: Robins AFB, GA

Established: 17 February 1997

Mission: Provides trained units and individuals to accomplish assigned tasks in support of national objectives. Performs peacetime missions that are compatible with training and mobilization readiness requirements.

Responsibilities: Primarily airlift and refueling duties. Also provides functional mission support units, including aerial port operations, civil engineer, security forces, intelligence, military training, communications, mobility support, combat logistics support, transportation, and services.

### **Air Force Space Command (AFSPC)**

HQ: Peterson AFB, CO

Established: 1 September 1982

Mission: To defend the United States through control and exploitation of space. The command's professionals are the best missile-space team in the world, making space reliable and routine for the warfighter by continuously improving the command's ability to provide and support combat forces. AFSPC has four primary mission areas: space force support, space control, space force enhancement, and space force application.

Responsibilities: Places high-value payloads in space with a variety of expendable launch systems, and operates those assets in the medium of space. Provides weather, communications, ballistic missile warning, and intelligence to warfighters in unified commands. Prepared to ensure space superiority by conducting counterspace operations such as surveillance, negation and protection, and space force application. Provides the land-based ballistic missile portion of nuclear deterrent TRIAD. Also operates sensors that provide direct input to NORAD/USSPACECOM for attack warning and assessment to the National Command Authorities of both the United States and Canada.

### **Air Force Special Operations Command (AFSOC)**

HQ: Hurlburt Field, FL

Established: 22 May 1990

Mission: Provides the air component of U.S. Special Operations Command, deploying specialized airpower and delivering special operations combat power.

Responsibilities: Provides direct action, unconventional warfare, special reconnaissance, foreign internal defense, and counterterrorism support to unified commands.

### **Air Mobility Command (AMC)**

HQ: Scott AFB, IL

Established: 1 June 1992

Mission: Provides airlift, air refueling, special air mission and aeromedical evacuation for U.S. forces. Supplies forces to theater commands to support wartime tasking.

Responsibilities: Lead command for requirements, operating procedures, tactics, standardization and evaluation, and overall fleet management for tanker and airlift aircraft. As the Air Force component of U.S. Transportation Command, it is the single manager for air mobility.

### **Pacific Air Forces (PACAF)**

HQ: Hickam AFB, HI

Established: 3 August 1944

Mission: Plans, conducts, and coordinates offensive and defensive air operations in the Pacific and Asian theaters.

Responsibilities: Organizes, trains, equips, and maintains resources to conduct air operations.

### **United States Air Forces in Europe (USAFE)**

HQ: Ramstein AB, Germany

Established: 7 August 1945

Mission: Provides responsive forward presence and decisive air and space power. Plans, conducts, controls, coordinates, and supports air and space operations to achieve United States national and NATO objectives based on taskings assigned by the Commander in Chief, U.S. European Command.

Responsibilities: Supports U.S. military plans and operations in parts of Europe, the Mediterranean, the Middle East, and Africa, spanning 13-million square miles and 83 countries from the northern tip of Norway to the southern tip of Africa.

### **Air National Guard (not a major command)**

HQ: Pentagon

Established: 18 September 1947

Mission: Enforces federal authority, suppresses insurrection, and defends the nation when mobilized by the president, Congress, or both. Units augment the Air Force by participating in operations and exercises worldwide by direction of the Air Staff, major commands, or joint/unified commands. Commanded by the governors of the 50 states, Puerto Rico, Guam, the Virgin Islands, and the Commanding General of the District of Columbia. Each governor is represented in the state or territory chain of command by an adjutant general. The ANG Readiness Center is a field operating agency.

## AIR FORCE MAJOR ACTIVE FACILITIES

*from January 1999 Edition of Airman Magazine*

*"The Book '99", pages 28-31.*

### **Altus AFB, OK. (AETC Base)**

### **Andersen AFB, Guam. (PACAF Base)**

Named for Gen James Roy Andersen, lost at sea on 26 Feb 1946.

### **Andrews AFB, MD (AMC Base)**

Named for Lt Gen Frank M. Andrews, killed in an aircraft accident 3 May 1943.

### **Arnold AFB, TN (AFMC Base)**

Named for Gen H. H. "Hap" Arnold.

### **Aviano AB, Italy (USAFE Base)**

### **Barksdale AFB, LA (ACC Base)**

Named for Lt Eugene H. Barksdale, a WWI airman killed in August 1926.

### **Beale AFB, CA (ACC Base)**

Named for Brig Gen E.F. Beale, an Indian agent in California prior to the Civil War.

### **Bolling AFB, DC (AF District of Washington)**

Named for Col Raynal C. Bolling, first high-ranking Air Service officer killed in WWI.

### **Brooks AFB, TX (AFMC Base)**

Named for Cdt Sidney Brooks Jr., killed 13 Nov 1917 while on his commissioning flight.

### **Cannon AFB, NM (ACC Base)**

Named for Gen John K. Cannon, WWII commander of all allied air forces in the Mediterranean and former TAC commander.

### **Charleston AFB, SC (AMC Base)**

### **Columbus AFB, MS (AETC Base)**

### **Davis-Monthan AFB, AZ (ACC Base)**

Named for 1Lt Samuel H. Davis, killed 28 Dec 1921, and 2Lt Oscar Monthan, killed 27 Mar 1924.

### **Dover AFB, DE (AMC Base)**

### **Dyess AFB, TX (ACC Base)**

Named for Lt Col William E. Dyess, WWII fighter pilot killed in a crash December 1943.

### **Edwards AFB, CA (AFMC Base)**

Named for Capt Glen W. Edwards, killed during YB-49 Flying Wing crash 5 June 1948.



**Eglin AFB, FL (AFMC Base)**

Named for Lt Col Frederick I. Eglin, WWI flier killed in an aircraft accident 1 Jan 1937.

**Eielson AFB, AK (PACAF Base)**

Named for Carl Ben Eielson, arctic aviation pioneer who died in November 1929.

**Ellsworth AFB, SD (ACC Base)**

Named for BGen Richard E. Ellsworth, killed 18 March 1953.

**Elmendorf AFB, AK (PACAF Base)**

Named for Capt Hugh Elmendorf, killed 13 Jan 1933 during flight testing.

**Fairchild AFB, WA (AMC Base)**

Named for Gen Muir S. Fairchild, AF Vice Chief of Staff at time of his death in 1950.

**Fort Worth NAS JRB, TX**

**Francis E. Warren AFB, WY (AFSPC Base)**

Named for Francis Emory Warren, Wyoming Senator and first state governor

**Goodfellow AFB, TX (AETC Base)**

Named for 1Lt John J. Goodfellow Jr., a WWI fighter pilot killed in combat 14 Sep 1918.

**Grand Forks AFB, ND (AMC Base)**

**Hanscom AFB, MA (AFMC Base)**

Named for Laurence G. Hanscom, a pre-WWII pioneer of private aviation killed in 1941.

**Hickam AFB, HI (PACAF Base)**

Named for Lt Col Horace M. Hickam, air pioneer, who was killed in a crash 5 Nov 1934

**Hill AFB, UT (AFMC Base)**

Named for Maj Ployer P. Hill, killed 30 Oct 1935 while test-flying the first B-17.

**Holloman AFB, NM (ACC Base)**

Named for Col George Holloman, killed in a B-17 crash on 19 Mar 1946.

**Howard AFB, Panama (ACC Base)**

Named for Maj Charles Harold Howard.

**Hurlburt Field, FL (AFSOC Base)**

Named for Lt Donald W. Hurlburt, WWII pilot killed on 1 Oct 1943.

**Incirlik AB, Turkey (USAFE Base)**

Base name means "fig orchard" in Turkish.

**Kadena AB, Japan (PACAF Base)**

**Keesler AFB, MS (AETC Base)**

Named for 2Lt Samuel R. Keesler Jr., a WWI aerial observer killed in action 9 Oct 1918.

**Kelly AFB, TX (AFMC Base)**

Named for Lt George Kelly, first Army pilot to lose his life in a military aircraft 10 May 1911.

**Kirtland AFB, NM (AFMC Base)**

Named for Col Roy C. Kirtland, commandant of Langley Field in the 1930s and died 2 May 1941.

**Kunsan AB, South Korea (PACAF Base)****Lackland AFB, TX (AETC Base)**

Named for BGen Frank D. Lackland, early commandant of Kelly Field flying school; died in 1943.

**Lajes Field, Azores, Portugal (ACC Base)****Langley AFB, VA (ACC Base)**

Named for Samuel Pierpont Langley, an aviation pioneer and scientist; died in 1906.

**Laughlin AFB, TX (AETC Base)**

Named for 1Lt Jack Thomas Laughlin, a Del Rio native and B-17 pilot killed over Java 29 Jan 1942.

**Little Rock AFB, AR (AETC Base)****Los Angeles AFB, CA (AFMC Base)****Luke AFB, AZ (AETC Base)**

Named for 2Lt Frank Luke Jr., first American aviator to receive the Medal of Honor; killed in action 29 Sep 1918 in France.

**MacDill AFB, FL (AMC Base)**

Named for Col Leslie MacDill, killed in an aircraft accident on 8 Nov 1938.

**Malmstrom AFB, MT (AFSPC Base)**

Named for Col Einar A. Malmstrom, WWII fighter commander killed 24 Aug 1954.

**Maxwell AFB, AL (AETC Base)**

Named for 2Lt William C. Maxwell, killed in an air accident on 12 Aug 1920.

**Maxwell AFB Gunter Annex, AL (AETC Base)**

Named for William A. Gunter, former Montgomery mayor and air power advocate who died in 1940.

**McChord AFB, WA (AMC Base)**

Named for Col William C. McChord, killed 18 Aug 1937 during a forced landing in VA.

**McClellan AFB, CA (AFMC Base)**

Named for Maj Hezekiah McClellan, a pioneer in arctic aeronautical tests, killed in a crash on 25 May 1936.

**McConnell AFB, KS (AMC Base)**

Named for Capt Fred J. McConnell, WWII B-24 pilot who died in a private plane crash 25 Oct 1945; also for his brother, 2Lt Thomas L. McConnell, WWII B-24 pilot, killed 10 July 1943 during a combat mission.

**McGuire AFB, NJ (AMC Base)**

Named for Maj Thomas B. McGuire Jr., P-38 pilot and Medal of Honor recipient, killed in action 7 Jan 1945.

**Minot AFB, ND (ACC Base)**

Named for city of Minot, which donated money to purchase the land.

**Misawa AB, Japan (PACAF Base)****Moody AFB, GA (ACC Base)**

Named for Maj George P. Moody, killed while testing a Beech AT-10 on 5 May 1941.

**Mountain Home AFB, ID (ACC Base)****Nellis AFB, NV (ACC Base)**

Named for 1Lt William H. Nellis, WWII P-47 pilot killed in Europe 27 Dec 1944.

**Offutt AFB, NE (ACC Base)**

Named for 1Lt Jarvis J. Offutt, WWI pilot who died 13 Aug 1918.

**Osan AB, South Korea (PACAF Base)**

Named for nearby city of Osan, site of first fighting between U.S. and North Korean forces July 1950

**Patrick AFB, FL (AFSPC Base)**

Named for Maj Gen Mason M. Patrick, Chief of the AEF Air Service in WWI and Chief of the Air Service/Air Corps from 1921-1927.

**Peterson AFB, CO (AFSPC Base)**

Named for 1Lt Edward J. Peterson, killed in an aircraft crash at the base 8 Aug 1942.

**Pope AFB, NC (AMC Base)**

Named for 1Lt Harley H. Pope, a WWI flier killed when his JN-4 "Jenny" crashed into the Cape Fear River on 7 Jan 1917.

**RAF Lakenheath, England (Royal Air Force Base)**

Named after nearby village.

**RAF Mildenhall, England (Royal Air Force Base)**

Named after nearby village.

**Ramstein AB, Germany (USAFE Base)****Randolph AFB, TX (AETC Base)**

Named for Capt William M. Randolph, killed 17 Feb 1928 in an AT-4 Texan crash.

**Robins AFB, GA (AFMC Base)**

Named for BGen Augustine Warner Robins, a former chief of the Air Corps materiel division; died 16 June 1940.

**Schriever AFB, CO (AFSPC Base)**

Named for Retired Gen Bernard A. Schriever, father of the Air Force space program. Formerly Falcon AFB, it was rededicated 5 June 1998 to Schriever AFB.

**Scott AFB, IL (AMC Base)**

Named for Cpl Frank S. Scott, first enlisted man to die in an aircraft accident; killed on 28 Sep 1912.

**Seymour Johnson AFB, NC (ACC Base)**

Named for Navy Lt Seymour A. Johnson, a Goldsboro native; killed 5 Mar 1941 in an aircraft accident.

**Shaw AFB, SC (ACC Base)**

Named for 2Lt Ervin D. Shaw, killed in action during a reconnaissance mission in France 9 Jul 1918.

**Sheppard AFB, TX (AETC Base)**

Named for U.S. Senator Morris E. Sheppard, who died 9 Apr 1941.

**Spangdahlem AB, Germany (USAFE Base)**

Named after a nearby town.

**Tinker AFB, OK (AFMC Base)**

Named for Maj Gen Clarence L. Tinker, who went down at sea on 7 Jun 1942.

**Travis AFB, CA (AMC Base)**

Named for Brig Gen Robert F. Travis, killed in a B-29 accident on 5 Aug 1950.

**Tyndall AFB, FL (AETC Base)**

Named for 1Lt Frank B. Tyndall, a WWI fighter pilot; killed in a P-1 crash on 15 Jul 1930.

**Vance AFB, OK (AETC Base)**

Named for Lt Col Leon R. Vance Jr., a Medal of Honor recipient killed 26 Jul 1944 while enroute to the U.S. from Iceland, when the aircraft he was on disappeared in the Atlantic

**Vandenberg AFB, CA (AFSPC Base)**

Named for Gen Hoyt S. Vandenberg, second Air Force Chief of Staff.

**Whiteman AFB, MO (ACC Base)**

Named for 2Lt George A. Whiteman, first pilot to die during aerial combat in the Japanese attack on Pearl Harbor.

**Wright-Patterson AFB, OH (AFMC Base)**

Named after aviation pioneers Wilbur and Orville Wright and 1Lt Frank S. Patterson, killed in an aircraft crash on 19 Jun 1918.

**Yokota AB, Japan (PACAF Base)**

# Aerospace Vehicle MDS Designators for Aircraft

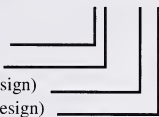
**YF - 22A**

Status prefix (prototype)

Basic mission (Fighter)

Design number (22nd design)

Series (First version of design)



Status Prefix	Modified Mission	Basic Mission	Vehicle Type
G-Permanently grounded	A-Attack	A-Attack	G-Glider
J-Special test (temporary)	C-Transport	B-Bomber	H-Helicopter
N-Special test (permanent)	D-Director	C-Transport	S-Spaceplane
X-Experimental	E-Special electronic installation	E-Special electronic installation	V-VTOL/STOL
Y-Prototype	F-Fighter	F-Fighter	Z-Lighter-than-air
Z-Planning	H-Search/Rescue	O-Observation	
	K-Tanker	P-Patrol	
	L-Cold Weather	R-Reconnaissance	
	M-Multimission	S-Antisubmarine	
	O-Observation	T-Trainer	
	P-Patrol	U-Utility	
	Q-Drone	X-Research	
	R-Reconnaissance		
	S-Antisubmarine		
	T-Trainer		
	U-Utility		
	V-Staff		
	W-Weather		

## Air Force Aircraft Tail Markings

<b>Code</b>	<b>Aircraft</b>	<b>Unit, Location and Command</b>
AK	F-15C/D/E, C-12J/F, C-130H, E-3B	3rd WG, Elmendorf AFB, AK (PACAF)
AK	F-16C/D, A/OA-10	354th FW, Eielson AFB, AK (PACAF)
AF	TG3,4,7,9,11	94th FTS, USAF Academy, CO
AF	UV-18	98th FTS, USAF Academy, CO
AL	F-16C/D	187th FW, Montgomery, AL (ANG)
AU	C-21A	42nd ABW, Maxwell AFB, AL (AETC)
AV	F-16C/D	31st FW, Aviano AB, Italy (USAFE)
AZ	F-16A/B	162nd FW, Tucson, AZ (ANG)
BB	U-2R/S, T-38A	9th WG, Beale AFB, CA (ACC)
BC	A/OA-10A	110th FW, Battle Creek MI (ANG)
BD	A/OA-10A, B-52H	917th WG, Barksdale AFB, LA (AFRES)
BH	KC-135	117th ARW, Birmingham, AL (ANG)
CA	HH-60G, MC-130P	129th RG, Moffett NAS, CA (ANG)
CB	T-37B, T-38A, AT-38B	14th FTW, Columbus AFB, MS (AETC)
CC	F-16C/D	27th FW, Cannon AFB, NM (ACC)
CI	C-130E	146th AW, Channel Island ANG, CA (ANG)
CO	F-16C/D	140th FW, Buckley ANGB, CO (ANG)
CR	C-130E/H	302nd AW, Peterson AFB, CO (AFRES)
CS	C-21A	21st SPW, Peterson AFB, CO (AFSPC)
CT	A/OA-10A	103rd FG, Bradley ANGB, CT (ANG)
DC	F-16/C/D, C-21, C-22	113th FW, Andrews AFB, MD (ANG)
DM	A-10, EC-130E/H	355th WG, Davis-Monthan AFB, AZ (ACC)
DR	HH-60G	939th RW, Davis-Monthan, AZ (AFRES)
DY	B-1B	7th WG, Dyess AFB, TX (ACC)
ED	Various	412th TW, Edwards AFB, CA (AFMC)
EG	F-15C	33rd FW, Eglin AFB, FL (ACC)
EL	B-1B	28th BW, Ellsworth AFB, SD (ACC)
EN	T-37A/B, T-38A AT-38B	80th FTW, Sheppard AFB, TX (AETC)
ET	Various	40th Test Wing, Eglin AFB, FL, (AFMC)
FE	UH-1N	90th MW, F.E. Warren AFB, WY (AFSPC)

FF	C-21A, F-15C/D, UH-1N	1st FW, Langley AFB, VA (ACC)
FL	F-15A/B	125th FG, Jacksonville, FL (ANG)
FL	MC-130P, HH-60G	939th RW, Patrick AFB, FL (AFRES)
FM	F-16A/B	482nd FW, Homestead AFB, FL (AFRES)
FS	F-16A/B	188th FW, Ft. Smith, AR (ANG)
FT	A/OA-10A	23rd FG, Pope AFB, NC (ACC)
FW	F-16C/D	122nd FW, Ft Wayne, IN (ANG)
GA	C-130H	116th BW, Dobbins ARB, GA (ANG)
GA	C-130H	165th AG, Savannah, GA (ANG)
GF	HH-1H	321st MG, Grand Forks AFB, ND (AFSPC)
HA	F-16C/D	185th FG, Sioux City, IA (ANG)
HAFB	F-16	Ogden ALC, Hill AFB, UT (AFMC)
HI	F-16C/D	419th FW, Hill AFB, UT (AFRES)
HL	F-16C/D	388th FW, Hill AFB, UT (ACC)
HO	F-117A, T-38A, AT-38B	40th FW, Holloman AFB, NM (ACC)
HT	AT-38B	46th TG, Holloman AFB, NM (AFMC)
HW	C-21A, C-27A, C-130E/H, KC-135	24th WG, Howard AFB, Panama (ACC)
IA	F-16C/D	132nd FW, Des Moines, IA (ANG)
IL	C-130E	182nd AW, Peoria, IL (ANG)
IS	HH-60	85th Group, NAS Keflavik, Iceland (ACC)
JS	E-8B	93rd ACW, Robins AFB, GA (ACC)
JZ	F-15A/B	159th FW, NAS New Orleans, LA (ANG)
KC	O/OA-10A	442nd FW, Whiteman AFB, MO (AFRES)
KS	C-12F, C-21A	81st TRW, Keesler AFB, MS (AETC)
KT	WC-130H, C-130E	403rd WG, Keesler AFB, MS (AFRES)
LA	B-52H	2nd BW, Barksdale AFB, LA (ACC)
LF	F-16A/B/C/D	56th FW, Luke AFB, AZ (AETC)
LK	C-130E/H	314th AW, Little Rock AFB, AR (AETC)
LN	F-15C/D/E	48th FW, RAF Lakenheath, England (USAFE)
LR	F-15C/D	944th FW, Luke AFB, AZ (AFRES)
MA	A/OA-10A	104th FW, Barnes MAP, MA (ANG)
MD	A/OA-10A	175th FW, Baltimore, MD (ANG)
MD	C-130E	135th AG, Baltimore, MD (ANG)
MI	F-16C/D, C-130E	127th FW, Selfridge ANGB, MI (ANG)
MM	UH-1N	341st MW, Malmstrom AFB, MT (AFSPC)

MINN	C-130E	133rd AW, Minn-St. Paul IAP/ARS, MN (ANG)
MO	F-15C/D/E, F-16C/D, KC-135, B-1B	366th WG, Mountain Home AFB, ID (ACC)
MT	B-52H	5th BW, Minot AFB, ND (ACC)
MT	HH-1H	91st MW, Minot AFB, ND (AFSPC)
MY	F-16C/D, A/OA-10A	347th FW, Moody AFB, GA (ACC)
NJ	KC-135E	108th ARW, McGuire AFB, NJ (ANG)
NM	F-16C/D	150th FG, Kirtland AFB, NM (ANG)
NO	F-15A/B	926th FW, NAS New Orleans, LA (AFRES)
NY	F-16C/D	174th FW, Hancock Field, NY (ANG)
OF	RC-135S/U/V/W EC0135C, E-4B, OC-135B	55th WG, Offutt AFB, NE (ACC)
OH	F-16C/D	178th FW, Springfield, OH (ANG)
OH	F-16C/D	180th FW, Toledo, OH (ANG)
OK	F-16C/D	138th FG, Tulsa, OK (ANG)
OK	E-3B/C	552nd ACW, Tinker AFB, OK (ACC)
OR	F-15A/B	142nd FG, Portland, OR (ANG)
OS	F-16C/DA/OA-10A C-12J, HH-60G, MH-53J	51st FW, Osan AB, Korea (PACAF)
OT	F-15A/B/C/E, F-16A/C, EF-111A	USAFAWC, Eglin AFB, FL (ACC)
OT	F-15A/B/C/D/E, F-16A/B/C/D	79th TEG, Eglin AFB, FL (AFMC)
PA	A/OA-10A	111th FG, Willow Grove, PA (ANG)
PA	EC-130E	193rd SOG, Harrisburg, PA (ANG)
PD	HC-130P, HH-60G	939th RW, Portland, OR (AFRES)
PR	F-16A/B	156th FW, San Juan, Puerto Rico (ANG)
PX	C-130H	139th AG, St. Joseph, MO (ANG)
RA	C-21A, T-1A, T-3A,	12th FTW, Randolph AFB, TX (AETC)
RG	C-130E/H	Warner Robins ALC, Robins AFB, GA (AFMC)
RI	C-130E	143rd AG, Quonset State AP, R.I. (ANG)
RS	T-43, C-9, C-20, C-21, C-130E/H	86th AW, Ramstein AB, Germany (USAFE)
SA	F-16A/B	149th FG, Kelly AFB, TX (ANG)
SC	F-16C/D	169th FG, McEntire ANG, S.C. (ANG)
SD	F-16C/D	114th FG, Sioux Falls, S.D. (ANG)
SH	KC-135R	507th ARW, Tinker AFB, OK (AFRES)
SI	F-16A/B	183rd FW, Springfield, IL (ANG)
SJ	F-15E	4th FW, Seymour Johnson AFB, NC (ACC)



SL	F-15A/B	131st FW, St. Louis, MO (ANG)
SM	A-10A, EF-111A T-38A	Sacramento ALC, McClellan AFB, CA (AFMC)
SP	F-16C/D, A/OA-10A, F-15C/D	52nd FW, Spangdahlem AB, Germany (USAFE)
SW	F-16C/D	20th FW, Shaw AFB, SC (ACC)
TF	F-16C/D	301st FW, NAS JRB Ft. Worth, TX (AFRES)
TH	F-16C/D	181st FW, Terre Haute, IN (ANG)
TY	F-16C/D	325th FW, Tyndall AFB, FL (AETC)
VA	F-16C/D	192nd FG, Richmond, VA (ANG)
VN	T-1A, T-37B, T-38A	71st FTW, Vance AFB, OK (AETC)
VT	F-16C/D	158th FW, Burlington, VT (ANG)
WA	F-15C/D/E F-16A/B/C/D/, A-10A, HH-60, Predator	57th WG, Nellis NV (ACC)
WI	F-16C/D	115th FW, Madison, WI (ANG)
WM	B-2A, T-38A	509th BW, Whiteman AFB, MO (ACC)
WP	F-16C/D	8th FW, Kunsan AB, Korea (PACAF)
WV	C-130E	167th AG, Martinsburg, WV (ANG)
WW	F-16C/D	35th FW, Misawa AB, Japan (PACAF)
XL	T-1A, T-37B, T-38A	47th FTW, Laughlin FB, TX (AETC)
YJ	C-130E/H, C-9A, C-21A, UH-1N	374th AW, Yokota AB, Japan (PACAF)
ZZ	F-15C/D, KC-136R, E-3B, HH-60G	18th WG, Kadena AB, Japan (PACAF)

**Aircraft, for the following bases, have no tail codes. They will use either wing or command insignias.**

C-17, C-5, C-5A, C-141B, KC-135R	97th AMW, Altus AFB, OK (AETC)
C-17, C-141	437th AW, Charleston AFB, SC (AMC)
C-5	436th AW, Dover AFB,, DE (AMC)
K-135	92nd ARW, Fairchild AFB, WA (AMC)
KC-135R	434th ARW, Grissom ARB, IN (AFRC)
MC-130E/H, AC-130H/U, MH-53J MC-130P, MH-60G	16th SOW, Hurlburt Field, FL (AFSOC)

C-135E	15th ABW, Hickam AFB, HI (PACAF)
KC-135	6th ARW, MacDill AFAB, FL (AMC)
C-141, C-17	62nd AW, McChord AFB, WA (AMC)
KC-135	22nd ARW, McConnell AFB, KS (AMC)
KC-135R, C-141C	452nd AMW, March AFB, CA (AFRC)
KC-135R	100th ARW, RAF Mildenhall, England (USAFE)
C-9, C-21	375th AW, Scott AFB, IL (AMC)
C-5, KC-10	60th AMW, Travis AFB, CA (AMC)
C-141B/C	4445th AW, Wright-Patterson AFB, OH (AFRC)



## **Fairchild Republic A/OA-10 Thunderbolt II (“Warthog”)**

**Primary function:** Close air support; airborne forward air control; attack aircraft.

**Crew:** Pilot

**Armament:** One GAU-8/A 30mm seven-barrel Gatling gun; up to 16,000 pounds of mixed ordnance, including general-purpose bombs, incendiary and Rockeye II cluster bombs, Maverick missiles and laser-guided/electro-optically guided bombs, infrared countermeasure flares, electronic countermeasure chaff and jammer pods.

The A-10 was designed around its 30mm Gatling-gun for the specific purpose of destroying armored vehicles. The “Hog” was combat proven in Desert Storm, flying over 30% of the combat sorties and inflicting over 50% of the combat damage. It also achieved the only air-to-air gun kills of Desert Storm.



## **Lockheed AC-130H/U Spectre**

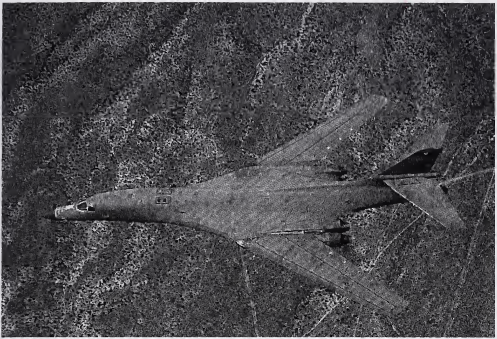
**Primary function:** Special Operations

**Crew:** Pilot, Co-Pilot, Navigator, Fire Control Officer, Electronic Warfare Officer, Flight Engineer, Loadmaster, Low-light TV Operator, Infrared Detection Set Operator and five (5) Aerial Gunners.

### **Armament:**

- AC-130H-** Two - fixed 20mm Vulcan cannon
- One - trainable 40mm Bofors cannon
- One - trainable 105mm howitzer
- AC-130U-** One - trainable 25mm Gatling gun
- One - trainable 40mm Bofors cannon
- One - trainable 105mm howitzer

A key supplier of firepower for Special Operations Command, the Spectre has infrared and radar targeting capability to allow for pinpoint accuracy at night.



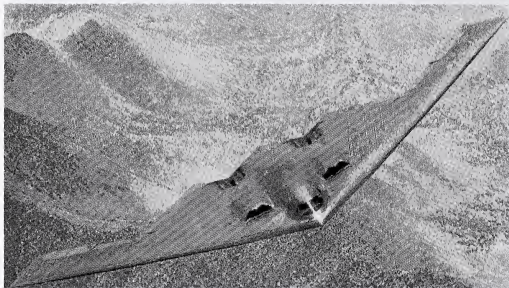
## **Rockwell International B-1B Lancer (“Bone”)**

**Primary function:** Multirole, long-range heavy bomber

**Crew:** Pilot, Co-Pilot, Offensive and Defensive Systems  
Officers

**Armament:** 84 - Mk 82 500 lb Conventional Bombs  
60 - Cluster bomb units (CBU-87 & CBU-97)

Designed to penetrate Soviet airspace in a nuclear war, the “Bone” is rapidly developing into a potent conventional bomber. With its three bomb bays, each capable of carrying up to 28 bombs, the B-1B can ingress and egress a target area at over 550 knots and 200 feet above the ground with its terrain following radar.



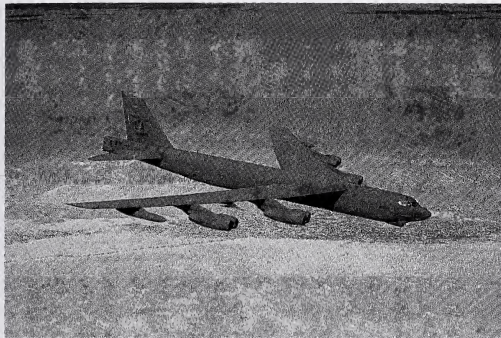
## **Northrop Grumman B-2 Spirit**

**Primary function:** Multirole bomber

**Crew:** Pilot & Mission Commander

**Armament:** Nuclear or conventional weapons to include Joint Direct Attack Munitions (JDAMs) and GPS Aided Munitions (GAMs).

The B-2 Spirit is a multirole bomber capable of delivering both conventional and nuclear munitions. The B-2 represents a dramatic leap forward in technology and a major milestone in our strategic modernization program. The B-2 has an unrefueled range of approximately 6000 miles. Whiteman AFB, MO, is the B-2's only operational base.



## **Boeing B-52H Stratofortress (“Buff”)**

**Primary function:** Long-range heavy bomber

**Crew:** A/C Commander, Pilot, Radar Navigator, Navigator,  
EWO

**Armament:** AGM-69A Short Range Attack Missiles  
AGM-129A Advanced Cruise Missile  
AGM-84 Harpoon Missile  
500/750/1000 lb Bombs

The “Buff” has been the backbone of the Air Force’s bomber fleet for over 40 years. It took part in the first strike in Desert Storm, flying nonstop from Barksdale AFB, LA to launch the first conventional cruise missiles in combat. Its primary mission today is as a cruise missile platform.



## **Lockheed C-5B Galaxy**

**Primary function:** Long-range, heavy logistics transport

**Crew:** Pilot, Co-Pilot, two Flight Engineers, two Loadmasters

The Galaxy is the Air Force's largest airlifter. It is capable of carrying up to 290,000 pounds of cargo, to include two M-60 main battle tanks or 3 CH-47 Chinook helicopters.





## **McDonnell Douglas C-9/VC-9 Nightingale**

**Primary function:** Aeromedical evacuation

**Crew:** Pilot, Co-Pilot, Flight Mechanic, two Flight Nurses  
and three Aeromedical Technicians

The C-9 has been in service since 1968, serving primarily as a “flying ambulance.” Based on the civilian DC-9 commercial airliner, the C-9 is also used for VIP transport. The C-9 can carry up to 40 litter patients or four litters and 40 ambulatory patients or other combinations.



### **Beechcraft C-12C/D Huron**

**Primary function:** Passenger/cargo airlift; pilot seasoning

**Crew:** Two - Pilots

**Cargo Capacity:** up to eight passengers or 4,764 lbs of cargo

Thirty military versions of the Super King Air were delivered to USAF in support of attache and military assistance advisory missions worldwide.



## **McDonnell Douglas C-17A Globemaster III**

**Primary function:** Cargo/tactical airlift

**Crew:** Pilot, Co-Pilot, Loadmaster

The first operational unit, 437th AW, was based at Charleston AFB, SC in June 1993. The C-17 is an air refuelable cargo transport designed to provide inter- and intratheater airlift of all classes of military cargo. It is designed to operate into small, austere airfields and provide the first capability to airland or airdrop/extract outsize cargo in a tactical environment.



### **Gulfstream C-20A/B/H Gulfstream III/IV**

**Primary function:** C-20A—operational support airlift; C-20B—special air missions

**Crew:** of up to 5, 14-18 Passengers

The C-20 provides logistics and contract support airlift for Andrews AFB in the CONUS and Ramstein AB in Germany.



## Learjet C-21A

**Primary function:** Passenger/cargo airlift

**Crew:** Pilot, Co-Pilot and up to eight Passengers

The military's Learjet provides VIP airlift support for most MAJCOMs. The C-21 is one of the Air Force's most reliable aircraft with a 95% mission completion rate.



## **Lockheed Martin C-130 Hercules (“Herk”)**

**Primary function:** Theater tactical airlift

**Crew:** Pilot, CoPilot, Navigator, Flight Engineer, Loadmaster

The C-130 can operate out of almost any airstrip in the world. The Hercules provides a wide variety of airlift missions—primarily paratropping troops and transporting equipment into hostile areas. The C-130 is also capable of accomplishing the mission of tactical airdrop. The versatility of the “Herk” has allowed for the development of many variations of the aircraft. Some of these variants include: the EC-130, which is used for specialized electronic missions; the HC-130 tanker aircraft; and the MC-130, which is used by SOF for night/adverse weather, low-level, deep-penetration missions. The C-130 has been in the Air Force inventory for more than 40 years, and is still in production.



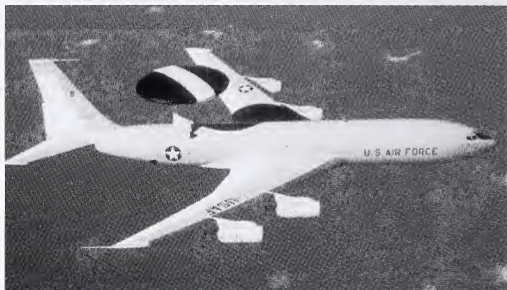
## **Lockheed C-141B Starlifter**

**Primary function:** Long-range troop/cargo airlift

**Crew:** Pilot, CoPilot, two Flight Engineers,  
and two Loadmasters

**Cargo Capacity:** Up to 200 fully equipped troops or 155 paratroopers

The C-141 has been the nucleus of the airlifter fleet for over 20 years. The C-141 is used for cargo transport and low level airdrop and troop drop missions.



**Boeing E-3B/C Sentry  
(Airborne Warning and Control System, “AWACS”)**

**Primary function:** Airborne surveillance; command, control and communications

**Crew:** Pilot, Co-Pilot, Navigator, Flight Engineer, Surveillance Technicians, Equipment Technicians, and Air Weapons Controllers (as required)

The Sentry serves as a survivable command and control center for identification, surveillance, and tracking of enemy airborne forces and for the command and control of NORAD forces over the continental US. Its look-down radar allows all-altitude surveillance over land or water at more than 200 miles.



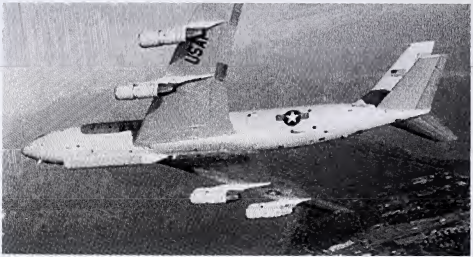


**Boeing E-4B National Airborne Operations Center  
(NAOC)**

**Primary function:** Airborne command post

**Crew:** Crew of Up To 114

Built around a Boeing 747 airframe, the E-4B serves as an interim national command center in a wartime environment. The E-4B can tie into commercial telephone and radio lines to make broadcasts to the general population.

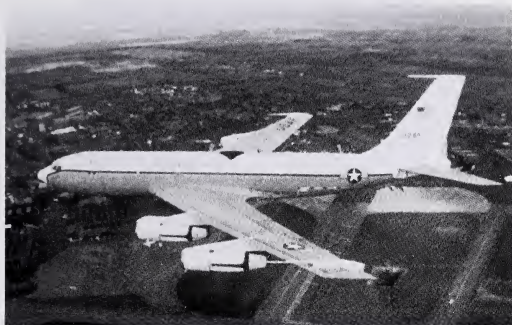


## **Northrop Grumman E-8C Joint STARS**

**Primary function:** Long-range, air-to-ground surveillance system.

**Crew:** Pilot, Co-pilot, Navigator, Flight Engineer, up to 18 USAF and Army specialists at operations and control consoles.

The USAF/US Army Joint Surveillance and Target Attack Radar System (Joint STARS) was deployed to Rhein-Main AB, Germany, to support Operation Joint Endeavor by providing critical surveillance information to the NATO-led operations in Bosnia-Herzegovina. The USAF is expanding its role to include bomb-damage assessment, SEAD, and Theater Missile Defense, with emphasis on the detection of mobile missile launchers and their decoys, following the unexpected, but highly successful, demonstration of the Joint STARS prototype capabilities during Operation Desert Storm.



## **Boeing EC-135 Looking Glass**

**Primary Function:** Command and Control

**Crew:** Flight Crew of 4, plus a staff of 18

The EC-135 provides airborne control of combat forces for ACC, PACAF, and USAFE. The EC-135 can control ICBMs from the air and serve as a communications link in a combat environment.



## **Boeing F-15C/D Eagle**

**Primary function:** Air superiority tactical fighter.

**Crew:** Pilot

**Armament:** M61A1 20mm internally mounted cannon  
AIM-9 L/M Sidewinder/AIM-7 F/M Sparrow  
AIM-120 AMRAAM

The Eagle is the premier air superiority fighter in the inventory. The F-15's powerful radar can search and track targets from all altitudes down to treetop levels. Eagles accounted for 36 of the 39 air-to-air kills in the Gulf War.



## **Boeing F-15E Strike Eagle**

**Primary function:** Air superiority tactical fighter. The E model is a totally integrated fighter for air-to-air and deep interdiction missions.

**Crew:** Pilot and Weapon Systems Officer

**Armament:** Laser guided munitions  
GBU-15 TV/IR guided bombs  
AGM-130 Rocket Powered GBU-15  
Cluster and general purpose weapons  
AIM-7, AIM-9, AIM-120

The F-15E is a two-seat, dual-role fighter and interdiction bomber. Equipped with LANTIRN, (Low Altitude Navigation and Targeting Infrared For Night) and advanced avionics, the F-15E is all-weather, day/night capable. Combat proven in Operation Desert Storm, the Strike Eagle was used to strike high-value strategic targets.



## **Lockheed-Martin F-16C/D Fighting Falcon (“Viper”)**

**Primary function:** Tactical fighter

**Crew:** Pilot

**Armament:** M61A1 20mm internally mounted cannon  
AIM-9 L/M Sidewinder/AIM-7 F/M Sparrow  
AIM-120 AMRAAM/Variety of conventional  
bombs/CBUs (Cluster Bomb Units)

The F-16 was designed to replace the F-4 as the Air Force’s multirole fighter. F-16s flew more than 13,500 sorties during Operation Desert Storm; is mainly used in a bombing and close air support role. The F-16 is a mainstay in the National Guard and Air Force Reserve as well as a popular export fighter.



## **Lockheed-Martin F-22A (ATF) Raptor**

**Primary function:** Air superiority tactical fighter.

**Crew:** Pilot

**Armament:** 2 - AIM-9L Sidewinders  
4 - AIM-120 AMRAAMs, growth to  
6 - AIM-120C  
1 - 20mm Gatling Gun  
2 - 100 lb JDAM

All weapons are capable of being carried internally for low observability purposes.

During flight testing, the YF-22 reached “supercruise” flight in excess of Mach 1.4 without afterburners. First F-22 production deliveries will be to Nellis AFB beginning in 2001. Initial Operational Capability is scheduled for November of 2004.



## **Lockheed-Martin F-117A Nighthawk**

**Primary function:** Fighter/bomber

**Crew:** Pilot

**Armament:** 2 internally carried 2000 lb  
Laser guided bombs

The F-117 combines stealth technology and a precision targeting system into a highly survivable and deadly accurate weapons system. During the Gulf War, 56-F-117's flew 1,270 combat sorties, into heavily defended target areas, never receiving a single enemy hit.





## **McDonnell Douglas KC-10A Extender**

**Primary function:** Aerial refueling; airlift

**Crew:** Pilot, Co-Pilot, Flight Engineer, Boom Operator

**Cargo Capability:** Seating for 75 passengers, max. cargo payload of approx. 170,000 lb.

The KC-10 is based on the commercial version of the DC-10, combining the tasks of tanker and cargo aircraft in a single unit. With this capability, the Extender supports fighter deployments, strategic airlift, reconnaissance, and conventional operations.



## **Boeing KC-135 Stratotanker**

**Primary function:** Aerial refueling

**Crew:** Pilot, Co-Pilot, Navigator, Boom Operator

**Capacity:** Up to eighty passengers, fuel load approx. 200,000 lbs.

The KC-135 made an invaluable contribution to the success of Operation Desert Storm: flying around-the-clock missions to maintain the operability of allied warplanes. Most KC-135s have been modified to "R" models with upgraded turbofan engines and numerous other system advances.



### **Sikorsky MH-53J Pave Low III**

**Primary function:** Special operations

**Crew:** Pilot, Co-Pilot, four additional crewmembers

**Armament:** Any combination of three 7.62 miniguns  
and .50 caliber machine guns

With FLIR and terrain following capability, the Pave Low is ideally suited for use in special operations. MH-53Js were used extensively in Panama and in Operation Desert Storm, performing both Special Operations Missions and combat rescue missions.



## **Sikorsky MH/HH-60G Pave Hawk**

**Primary function:** Special operations

**Crew:** Pilot, Co-Pilot, Flight Engineer, Gunner

**Armament:** Two 7.62mm miniguns, with provisions for a .50-caliber machine gun on SOF aircraft.

Modified from the basic Blackhawk helicopter, the Pave Hawk is used extensively in performing special operations missions, the Pave Hawk is used for infiltration/exfiltration of special operations teams and for combat rescue.



## **Boeing RC-135 Rivet Joint**

**Primary function:** Reconnaissance, Surveillance

**Crew:** Pilot, Co-Pilot, two Navigators, three Electronic Warfare Officers, Mission Crew

Designed for long duration strategic intelligence gathering and reconnaissance missions. RC-135s are equipped for specific types of missions such as electronic surveillance or communications monitoring.



## **Beechcraft T-1 Jayhawk**

**Primary function:** Tanker/airlift jet pilot trainer

**Crew:** Instructor Pilot and 2 Student Pilots

The T-1 is the Air Force's newest trainer. A modified business jet, the Jayhawk is used to train student pilots who will be going on to tanker and transport aircraft.



## Slingsby T-3A Firefly

**Primary function:** Pilot trainer

**Mission:** Flight Screener

**Crew:** Instructor Pilot, Student Pilot

Introduced to replace the T-41 in 1994, the T-3A is a fully aerobically certified aircraft. The T-3A is the newest version of Slingsby Aviation's T-67 Firefly line of military training aircraft, and is produced in UK. Screening students for SUPT, the T-3A is one of the newest introductions to the Air Force's inventory.



## **Raytheon T-6A (JPATS)**

**Primary function:** Pilot trainer

**Crew:** Instructor Pilot and Student Pilot

The T-6A will replace T-37Bs in training entry-level pilots, as well as supporting navigator training. First T-6A production deliveries will be to Randolph AFB, TX in 1999. Initial operational capability is scheduled for August 2001.



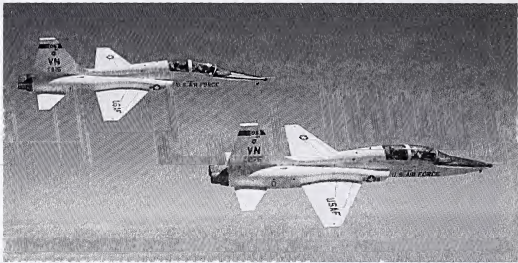


## Cessna T-37B Tweet

**Primary function:** Jet pilot trainer

**Crew:** Instructor Pilot and Student Pilot

Introduced in 1955, the T-37 is the primary trainer for UPT. All student pilots start with the T-37 before advancing to the T-1 or the T-38 advanced trainers. Many foreign countries, including those of Thailand, Greece, Chile, Jordan, Turkey, and Pakistan use the T-37 to train their pilots.



## Northrop T-38A/B Talon (“White Rocket”)

**Primary function:** Advanced jet pilot trainer

**Crew:** Instructor Pilot and Student Pilot

The AT-38 is used in Introduction to Fighter fundamentals (IFF) to introduce recent UPT graduates, assigned to fighter or attack aircraft, to Basic Fighter Maneuvers (BFM) and air-to-ground weapon delivery. The Talon first flew in 1959, and was once used as the Thunderbird aircraft.



## Schweitzer TG-7A

**Primary function:** Basic flight orientation

**Crew:** Instructor Pilot and Student Pilot

The motorglider is used by the Air Force Academy for basic orientation flights. The motor glider is used to support the “soar-for-all” program.



**Lockheed U-2R/S (“Dragon Lady”)**

**Primary function:** High-altitude tactical reconnaissance

**Crew:** Pilot

The U-2 is used as an extremely high altitude surveillance and reconnaissance platform. A variety of photographic and electronic sensors can be used to monitor battle areas or potential battle areas in support of US forces. All U-2s are being upgraded to the U-2S standards. The U-2S has a new engine that burns less fuel, weighs less, and produces more thrust.



## **Bell UH/HH-1 Iroquois (“Huey”)**

**Primary function:** Support for distinguished visitors, missile sites, ranges and search and rescue

**Crew:** Pilot, CoPilot, Flight Engineer

The “Huey” is the Air Force’s basic utility helicopter. It is used in support of troop transport, missile field operations, and medical evacuation. The Huey can carry up to 12 passengers.



## **De Havilland UV-18B Twin Otter**

**Primary function:** Parachute Training

**Crew:** Pilot and CoPilot

The Twin Otter is a STOL aircraft used at the Air Force Academy in support of the parachuting training. Modified from the civilian DHC-6 Twin Otter, the Academy operates the only UV-18s in the Air Force inventory.



## **Boeing VC-25A (“Air Force One”)**

**Primary function:** Presidential air transport

**Crew:** Pilot, CoPilot, Navigator, Support Crew as required

A highly modified Boeing 747, the VC-25A is the new “Air Force One”. The VC-25A is operated by the 89th Military Airlift Wing at Andrews AFB. There are only two VC-25A’s in the Air Force’s inventory, assigned to Air Mobility Command’s 89th Airlift Wing, Andrews Air Force Base, MD.



## **General Atomics Tier II (RQ-1A) Predator**

**Primary function:** Reconnaissance

**Crew:** None

The Predator is the only operational Unmanned Aerial Vehicle (UAV) in the Air Force inventory. The Predator has already demonstrated its capability during continuous 16-hour surveillance missions over Bosnia, using a satellite data link to provide real-time transmissions to a ground station. Although the Predator is autonomous, it is capable of midflight reprogramming or remote piloting. Navigation is by GPS/INS.



## **Other USAF Aircraft**

### **Short Brothers C-23A Sherpa**

The C-23A is used by AFMC. It can carry up to 7,000 lbs, including engines the size of the F100 series.

### **Chrysler Technologies C-27A Spartan**

These commercially available aircraft were modified for USAF for short takeoff and landing (STOL) intratheater transport. C-27As provide rapid response airlift of personnel and cargo to remote locations accessible primarily through unimproved airfields with short unprepared landing surfaces.

### **Boeing C-137B/C Stratoliner**

The Stratoliner is the military version of the Boeing 707. These aircraft are used for VIP transport.

### **de Havilland E-9A**

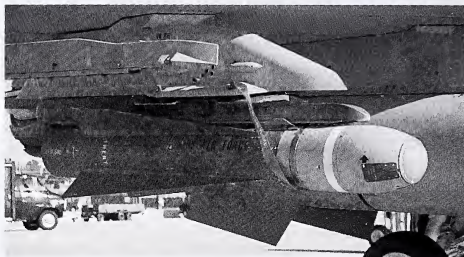
The E-9A is used for low-altitude, over the horizon data-gathering during missile tests and for surveillance to keep boats out of the Gulf Test Range during tests.

### **Boeing EC-18B/D Advance Range Instrumentation Aircraft (ARIA)**

These modified 707s are converted to house the world's largest airborne steerable antenna in a bulbous nose. The EC-18B/D is used to support DoD, NASA space, and missile programs.

# Airborne Tactical and Defense Missiles

## Air-to-Surface Missiles



### AGM-65 Maverick

The Maverick is a launch-and-leave air-to-surface missile. The launch and leave capabilities of the missile allow the pilot of the aircraft to seek other targets or leave the target area once the missile has been launched. The A and B models of the Maverick use an electro-optical (EO) guidance system (TV guided), and the D and G models use an imaging-infrared (IIR) seeker. First used in Vietnam, the Maverick saw extensive use in Operation Desert Storm with over 90% of the missiles fired from the A-10.

**Primary function:** Air-to-surface TV- or IIR guided missile

**Aircraft used by:** USAF F-15E, F-16, and A-10

**Warhead:** 125 lb, cone shaped (A/B/D); 300 lb, delayed-fuse penetrator, heavyweight (G)

**Dimensions:** Length - 8 ft 2 in; diameter - 1 ft;  
launch weight - 462 lb (A/B), 485 lb (D),  
and 670 lb (G)

**Range:** Effective range: 0.6 to 14 miles



### **AGM-129A ACM**

**Primary function:** Air-to-surface advanced cruise missile

**Warhead:** Nuclear Warhead



### **AGM-88A/B/C Harm ACM**

**Primary function:** Air-to-surface antiradiation missile, SEAD

**Warheads:** High explosive fragmentation

**Dimensions:** Wingspan - 3 ft; Length - 13 ft 8 in;  
diameter - 10 in;

**Performance:** Effective range: 0.6 to 14 miles

**Speed:** Supersonic

The AGM-88 HARM (high-speed antiradiation missile) is an air-to-surface tactical missile designed to seek and destroy enemy radar-equipped air defense systems. The AGM-88 can detect, attack and destroy a target with minimum aircrew input. The proportional guidance system that homes in on enemy radar emissions has a fixed antenna and seeker head in the missile nose. A smokeless, solid propellant, dual-thrust rocket motor propels the missile.

## **AGM-86C CALCM**

The AGM-86 conventional air-launched cruise missiles (CALCUM) were developed to increase the effectiveness of B-52H bombers. The small, winged AGM-86C missile is powered by a turbofan jet engine that propels it at sustained subsonic speeds. After launch, the missile's folded wings, tail surfaces and engine inlet deploy. The AGM-86C uses an onboard Global Positioning System (GPS) coupled with its inertial navigation system (INS) to fly. When launched in large numbers, each missile would need to be countered individually, making defense against them costly and complicated. The AGM-86C CALCM carries a conventional blast/fragmentation payload.

**Primary function:** Air-to-ground missile

**Aircraft used by:** USAF B-52H

**Warhead:** Conventional (C)

**Dimensions:** Length - 20 ft 9 in; Diameter - 24.5 in;

Wingspan - 12 ft; launch Weight - 3,150 lb

**Performance:** Speed - 550 mph; range - 1,500+ miles

## Air-to-Ground Missiles

### AGM-84D Harpoon

The Harpoon is an all-weather radar guided antiship missile that is used in maritime antisurface warfare operations. In a cooperative agreement with the USN, 19 B-52H's are presently equipped to each carry 8 Harpoon missiles in support of maritime operations.

**Primary function:** All-weather antiship missile

**Aircraft used by:** USAF B-52H

**Warhead:** Penetration high-explosive blast type  
(weighs 488 lb)

**Dimensions:** Length - 12 ft 7 in; diameter - 13.5 in; launch weight - 1145 lb

**Performance:** High subsonic speed, effective range: 57+ miles

### AGM-130A/GBU-15

The AGM-130 is a powered air-to-surface missile designed for high- and low-altitude strikes at standoff ranges against a variety of targets. Carrying forward the modular concept of the GBU-15 guided weapon system, the AGM-130 employs a rocket motor for extended range and an altimeter for altitude control. The AGM-130 will provide a significantly increased standoff range beyond that of the GBU-15, which is an unpowered, glide weapon used to destroy high value enemy targets. The AGM-130 is equipped with either a television or an imaging infrared seeker and data link.

**Primary function:** Air launched glide bomb

**Aircraft used by:** USAF F-15E

**Warhead:** Mk 84 bomb or BLU-109

**Dimensions:** Length - 12 ft 10.5 in; diameter - 1 ft 6 in;  
launch weight 2,917 lb

**Performance:** Subsonic cruising speed

## **GBU-24A/B**

**Primary function:** Precision guided penetrator

**Dimensions:** Length - 12 ft 10 in; diameter - 18 in;  
wingspan 6 ft 8 in

**Speed/Range:** Depends upon method of employment.

## **GBU-27/B**

**Primary function:** Hard target guided bomb

**Dimensions:** Length - 13 ft 10 in; diameter - 2 ft 4 in;  
wingspan 5 ft 5 in

**Speed/Range:** Depends upon method of employment.

## **AGM-142 Have Nap**

**Primary function:** Precision-guided missile

**Dimensions:** Length - 25 ft; diameter -2 ft 4 in;  
wingspan 5 ft 5 in

**Speed/Range:** Depends upon method of employment.

Hard target guided bomb

## **Air Intercept Missiles (AIM)**



## **AIM-7 Sparrow**

The Sparrow is a radar guided air-to-air missile with all-weather, all-altitude, and all-aspect capability.

**Primary function:** Air-to-air missile

**Aircraft used by:** USAF F-15, F-16

**Warhead:** High-explosive, blast fragmentation,  
weighing 86 lb

**Dimensions:** Length - 12 ft; diameter - 8 in;  
launch weight - 504 lb

**Performance:** Max speed estimated at Mach 3.5+  
Max effective range: E model = 14 miles;  
F model = 25+ miles



## **AIM-9 Sidewinder**

The Sidewinder is a close-range, air-to-air missile that uses infrared (IR) guidance. First developed in the 1960's. There are plans to develop versions that will take us into the year 2000.

**Primary function:** Air-to-air missile

**Aircraft used by:** USAF F-15, F-16, and A-10

**Warhead:** High-explosive, weighing 20.8 lb

**Dimensions:** Length - 9 ft 5 in; diameter - 5 in;  
launch weight - 191 lb

**Performance:** Max speed estimated at Mach 2+  
Max effective range: 10+ miles



### **AIM-120A Advanced Medium-Range Air-To-Air Missile (AMRAAM)**

Initially intended as a replacement for the AIM-7 Sparrow, the AMRAAM began development in 1981 with the first operational missile delivered in 1988. The AMRAAM uses active radar terminal homing to provide an all-weather, all-environment capability.

**Primary function:** Air-to-air missile

**Aircraft used by:** F-15 and F-16 (planned for use by the F-22) USN F-14 and F/A-18

**Dimensions:** Length - 12 ft; body diameter - 7 in;  
launch weight - 335 lb

**Performance:** Max speed estimated at Mach 4



## **Boeing LGM-30F/G Minuteman III ICBM Missile System Intercontinental Ballistic missile**

**Primary function:** Intercontinental ballistic missile

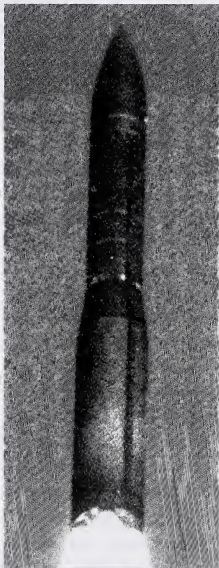
**Dimensions:** 60 ft; maximum diameter 5 ft 5 in

**Payload:** 3 - MK-12 or MK-12A warheads

**Performance:** More than 15,000 mph

**Range:** More than 6,000 miles

Minuteman remains a key element of the U.S. strategic deterrent posture despite its 20 years of operational service. It is a three-stage solid propellant ICBM deployed in underground silos. The Minuteman force is made up of 530 Minuteman IIIs. Minuteman III has a new third stage motor which gives longer range than the Minuteman II and also has MIRV (Multiple Independently Targetable Re-Entry Vehicle) capability, allowing the Minuteman III version to place warheads on three separate targets. Minuteman ICBMs have provided over half of our country's daily alert force for twelve percent of the total cost of strategic offensive forces.



## **Boeing LGM-118 Peacekeeper ICBM Missile System Intercontinental Ballistic missile**

**Primary function:** Intercontinental ballistic missile

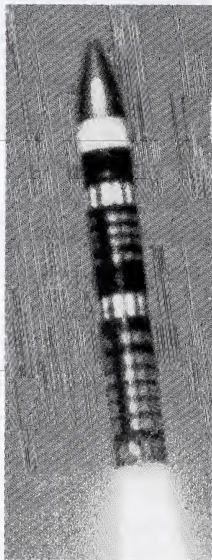
**Dimensions:** 71 ft; maximum diameter 7 ft 8 in

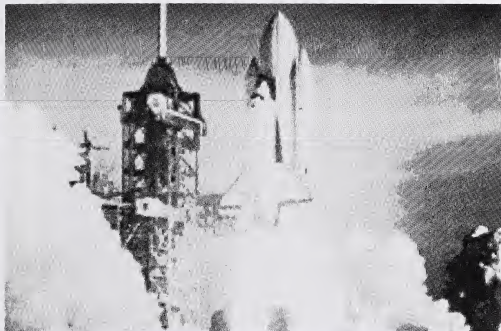
**Payload:** 10 - Avco MK-21 warheads

**Range:** More than 6,000 miles

The Peacekeeper reached full operational capability in December 1988 with 50 missiles deployed in existing Minuteman III silos near F.E. Warren AFB, Wyoming. The Peacekeeper is a four-stage, "cold launch" ICBM that carries up to ten independently targetable re-entry vehicles. It has many advantages over other missile systems in the US inventory. In particular, it is more accurate, carries more war heads, and has greater resistance to nuclear effects. Furthermore, it's more capable guidance system provides a decisive deterrent to any hostile first strike.

In September 1991, President George Bush in an unprecedented announcement outlined plans to withdraw several thousand nuclear weapons. Shortly after the President's speech B-1, B-52, and KC-135 aircraft were taken off day-to-day alert. As a result, the remaining ICBM force will be the Air Force's first line of nuclear deterrence.





## **Space Shuttle Orbiter/STS**

### **Space transportation**

Developed for use by both DoD and NASA, the Space Shuttle is the first reusable space vehicle. It consists of three parts, an orbiter, a jettisonable liquid fuel tank, and two solid propellant rocket boosters, the first operational mission was launched in November 1982. Following the loss of the Challenger in 1986, only three orbiters remained operational: Columbia, Discovery, and Atlantis. A fourth shuttle, Endeavor, came on line in March of 1992 to replace the Challenger. Carrying a crew of up to seven, each orbiter is capable of launching and repairing satellites and other payload as well as providing a laboratory for various experiments.

## Launch Vehicles



Titan IV

Primary function: **Space Lift Vehicle**

Dimensions: **Inertial upper stage length 17 ft., diameter flares from 90 to 114 in. First stage length 86.5 ft., diameter 10 ft. Second stage length 32.7 ft., diameter 10 ft.**

Payload: **Capable of placing up to 12,700 lb payloads into orbit using a Centaur G-Prime modified upper stage, and a 52,000 lb payload using the inertial upper stage.**



Delta II, III

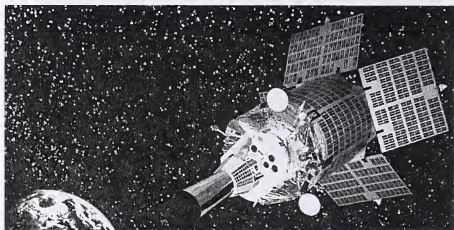
Primary function: **Space Lift Vehicle**

Dimensions: **Length 125 ft., 9 in., diameter 9 ft. 6 in.**

Payload: **Navstar Global Positioning System, NASA's MELV, commercial satellites and Space Test Program ARCOS mission.**

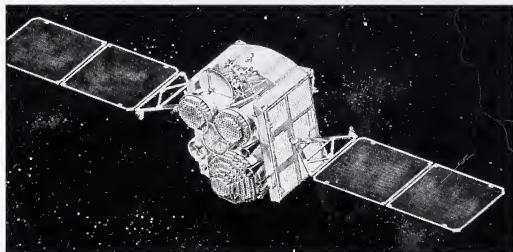
Others: **Atlas II, Centaur, Tital II, and Pegasus**

## Satellite Systems



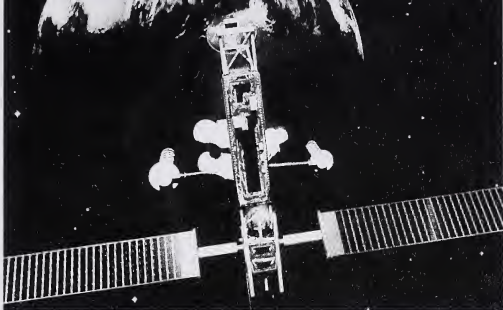
### **Defense Support Program (DSP)**

Defense Support Program (DSP) satellites, a key part of North America's early warning system, detect missile launches, space launches, and nuclear detonations. Operated by AFSPC, the satellites feed warning data to NORAD and US Space Command.



### **Defense Satellite Communications System (DSCS)**

DSCS satellites provide worldwide secure voice high-data-rate transmission, operating in superhigh frequency. The system is used for high-priority communications.



### **Milstar Satellite Communications System**

Milstar is a joint-service communications system that provides secure, jam-resistant EHF communications for all US armed services.

### **Defense Meteorological Satellite Program (DMSP)**

DMSP space vehicles have been collecting weather data for US military operations for about two decades. Two DMSP satellites survey the entire Earth four times a day.

### **Air Force Satellite Control Network**

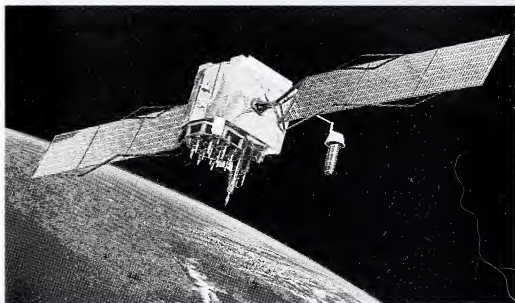
The Air Force Satellite Control Network consists of worldwide satellite operations centers comprised of remote tracking stations and command and control facilities. The facilities monitor satellites during launch, keep them in proper orbit and correct any anomalies.

## **Fleet Satellite Communications (FLTSATCOM)**

A constellation of five satellites used by the Air Force and the Navy, as well as the Presidential command network, has 23 channels (12 for the Air Force), providing UHF and EHF communications.

### **UHF Follow-On Satellites**

These satellites are a new generation of satellites with 39 channels, providing UHF communications to replace FLTSATCOM satellites.



### **Navstar Global Positioning System (GPS)**

The Navstar Global Positioning System is a constellation of 24 orbiting satellites providing navigation to military and civilian users around the world. The continuous navigation signals are so accurate that location can be determined to within a few feet.



# Air Force Academy Section





**Lieutenant General Tad J. Oelstrom**  
**Superintendent**

Lieutenant General Tad J. Oelstrom is the Superintendent of the U.S. Air Force Academy. He directs a four-year academic, military training, athletic and character development program leading to a bachelor's degree and commission as an Air Force Officer. Before his assignment at the Academy, Lieutenant General Oelstrom was the Commander, 3rd Air Force, Royal Air Force Mildenhall, England. Third Air Force is one of two numbered air forces in U.S. Air Forces in Europe, and is responsible for all U.S. Air Force operations and support activities north of the Alps. As an integral part of America's commitment to the North Atlantic Treaty Organization, Third Air Force's area of responsibility includes all U.S. Air Force missions and personnel in England, Germany, the Netherlands, Norway, Belgium, Denmark, Luxembourg, and portions of France. As European Command's "single point of contact" for representing U.S. forces in negotiations with the British Government, Third Air Force oversees host nation support agreements for all U.S. military forces based in the United Kingdom. Through the Partnership for Peace program, Third Air Force oversees military contact and assistance programs for a number of countries in Eastern Europe. Third Air Force is also responsible for contingency planning and support of U.S. security interests in Africa.

The general was born in Milwaukee and earned his commission from the U.S. Air Force Academy. A career fighter pilot, he is a graduate of the Fighter Weapons Instructor Course at Nellis Air Force Base, AZ. He flew 240 combat missions in two tours in Southeast Asia and served as an exchange officer with the Royal Air Force flying Hawker Hunter aircraft. He has commanded a squadron and three wings.

General Oelstrom is married to the former Sandra Illing of Waukesha, WI. They have three daughters: Kristin, Stephanie, and Megan.

## **Education:**

- 1965 Bachelor of Science degree in Engineering, United States Air Force Academy, CO
- 1969 Squadron Officer School, Maxwell AFB, AL.
- 1977 Air Command and Staff College, Maxwell AFB, AL.
- 1977 Master of Business Administration degree, Auburn University, AL.
- 1980 Industrial College of the Armed Forces, Ft. Lesley J. McNair, Washington, D.C.
- 1981 Army War College, Carlisle Barracks, PA.

## **Assignments:**

1. July 1965 - July 1966, Student Pilot, 71st Flying Training Wing, Vance AFB, OK.

2. August 1966 - February 1967, Student, F-4 Phantom upgrade training, 4443rd Combat Crew Training Wing, Davis-Monthan AFB, AZ.
3. March 1967 - July 1968, F-4 pilot, 417th Tactical Fighter Squadron, Ramstein AB, West Germany.
4. August 1968 - May 1969, F-4 Pilot, 417th Tactical Fighter Squadron, Mountain Home AFB, ID.
5. January 1970 - January 1971, Instructor Pilot, 366th Tactical Fighter Wing, Da Nang AB, South Vietnam.
6. January 1971 - December 1973, Wing Weapons Chief and later, Standardization and Evaluation Chief, 33rd Tactical Fighter Wing, Eglin AFB, FL.
7. January 1974 - July 1974, Hawker Hunter Fighter Weapons Instructor, tactical weapons unit, Royal Air Force Station Chivenor, England.
8. August 1974 - July 1976, Hawker Hunter Fighter Weapons Instructor, tactical weapons unit, Royal Air Force Brawdy, Wales.
9. July 1976 - July 1977, Student, Air Command and Staff College, Maxwell AFB, AL.
10. July 1977 - July 1980, Staff Officer, Deputy Chief of Staff for Requirements, Headquarters Tactical Air Command, Langley AFB, VA.
11. July 1980 - July 1981, student, Army War College, Carlisle Barracks, Pa.
12. July 1981 - February 1984, Wing Weapons Chief, 4th Tactical Fighter Wing, and later, Commander, 337th Tactical Fighter Squadron, Seymour Johnson AFB, NC.
13. February 1984 - April 1986, Deputy Commander for Operations, 33rd Tactical Fighter Wing, Eglin AFB, FL.
14. April 1986 - July 1987, Director of Fighter Operations, Headquarters Tactical Air Command, Langley AFB, VA.
15. August 1987 - June 1990, Vice Commander and later, Commander, 81st Tactical Fighter Wing, Royal Air Force Bentwaters, England.
16. June 1990 - September 1991, Executive Officer to the Deputy Commander-in-Chief, U.S. European Command, Stuttgart, Germany.
17. September 1991 - April 1992, Inspector General, Headquarters U.S. Air Forces in Europe, Ramstein AB, Germany.
18. May 1992 - October 1992, Commander, 4404th Composite Wing, Southwest Asia.
19. November 1992 - July 1993, Commander, 86th Wing, Ramstein Air Base and Commander, Kaiserslautern Military Community, Germany.
20. July 1993 - July 1995, Vice Commander, 9th Air Force and Deputy Commander, U.S. Central Command Air Forces, Shaw AFB, SC.
21. July 1995 - June 1997, Commander, 3rd Air Force, Royal Air Force Mildenhall, England.
22. July 1997 - Present, Superintendent, United States Air Force Academy, CO.

## **Flight Information:**

Rating: Command Pilot

Flight hours: More than 4,400

Aircraft flown: T-37, T-38, F-4, A-10, F-15, F-16 and Hawker Hunter

## **Major Awards and Decorations:**

Defense Superior Service Medal

Legion of Merit

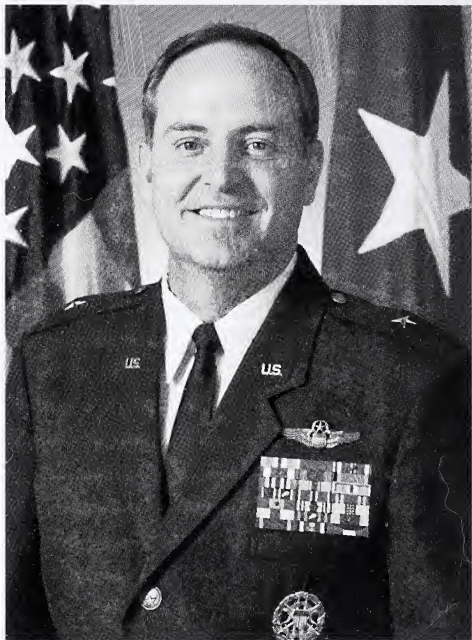
Distinguished Flying Cross with oak leaf cluster

Meritorious Service Medal with four oak leaf clusters

Air Medal with 15 oak leaf clusters

## **Effective Dates of Promotions:**

Second Lieutenant	Jun 5, 1965
First Lieutenant	Dec 9, 1966
Captain	Jun 13, 1968
Major	May 1, 1976
Lieutenant Colonel	Dec 1, 1979
Colonel	Sep 1, 1984
Brigadier General	Sep 1, 1991
Major General	Sep 1, 1993
Lieutenant General	Jul 1, 1997



**Brigadier General Mark A. Welsh, III**  
**Commandant of Cadets**

Brigadier General Mark A. Welsh III is Commandant of Cadets and Commander, 34th Training Wing, U.S. Air Force Academy, CO. He commands and administers the 4,000 member cadet wing and supporting Air Force staff function. His responsibilities include cadet military training and airmanship education, supervision of cadet life activities, facilities, and logistics support.

The general was born January 26, 1954, in San Antonio, TX. He entered the Air Force in June 1976 as a graduate of the U.S. Air Force Academy. While commanding the 4th Tactical Fighter Squadron, Hill AFB, UT, he was responsible for the squadron's combat operations during Operation Desert Storm. He has been assigned to numerous operational, command and staff positions.

General Welsh and his wife, Elizabeth, of Oyster Bay, NY, are the parents of three sons and one daughter.

## **Education:**

- 1976 Bachelor of Science degree, U.S. Air Force Academy, Colorado Springs, CO
- 1977 Undergraduate Pilot Training, Williams AFB, AZ
- 1984 Squadron Officer School, by correspondence
- 1986 Air Command and Staff College, by correspondence
- 1987 Master of Science degree in Computer Resource Management, Webster University, St. Louis, MO
- 1988 United States Army Command and General Staff College, Ft. Leavenworth, KS
- 1990 Air War College, by correspondence
- 1993 National War College, Washington, D.C.
- 1995 Fellow, Massachusetts Institute of Technology Seminar XXI

## **Assignments:**

1. Aug 76 - Jul 77, student, Undergraduate Pilot Training, Williams AFB, AZ
2. Jul 77 - Jan 81, T-37 Instructor Pilot and Class Commander, Williams AFB, AZ
3. Jan 81 - May 81, student, Fighter Lead-in Training, Holloman AFB, NM
4. May 81 - Aug 81, student, A-10 Training, Davis-Monthan AFB, AZ
5. Aug 81 - May 84, Instructor Pilot, Flight Commander, and Wing Standardization/Evaluation Flight Examiner, Royal Air Force Woodbridge, United Kingdom

6. May 84 - Jun 87, Commander of Cadet Squadron 5 and Executive Officer to Commandant of Cadets, USAF Academy, CO
7. Jun 87 - Jun 88, student, U.S. Army Command and General Staff College, Ft Leavenworth, KS
8. Jun 88 - Oct 88, student, F-16 Conversion Training, Luke AFB, AZ
9. Oct 88 - Jul 92, Operations Officer in both the 4th and 34th Tactical Fighter Squadrons, Commander, 4th Squadron, where he led the squadron in combat operations during Operation Desert Storm, Hill AFB, UT
10. Jul 92 - Jun 93, student, National War College, Washington D.C.
11. Jun 93 - Jun 95, Chief, Defense and Space Operations Division, Operations Directorate (J-3), The Joint Staff, Pentagon
12. Jun 95 - Apr 97, Commander, 347th Operations Group, Moody AFB, GA
13. Apr 97 - Jun 98, Commander, 8th Fighter Wing, Kunsan AB, Republic of Korea
14. Jun 98 - Jun 99, Commander of the College of Aerospace Doctrine, Research, and Education, Maxwell AFB, AL
15. Jun 99 - Present, Commandant of Cadets and Commander 34th Training Wing, U.S. Air Force Academy, USAF Academy, CO

#### Flight Information:

**Rating:** Command Pilot

**Flight hours:** more than 3,200

**Aircraft flown:** F-16, A-10, T-37, TG-7A

#### Major Awards and Decorations:

Defense Superior Service Medal

Legion of Merit

Distinguished Flying Cross with oak leaf cluster

Air Medal with oak leaf cluster

Meritorious Service Medal with three oak leaf clusters

Air Achievement Medal with two oak leaf clusters

Air Force Commendation Medal with one oak leaf cluster

#### Effective Dates of Promotion:

Second Lieutenant

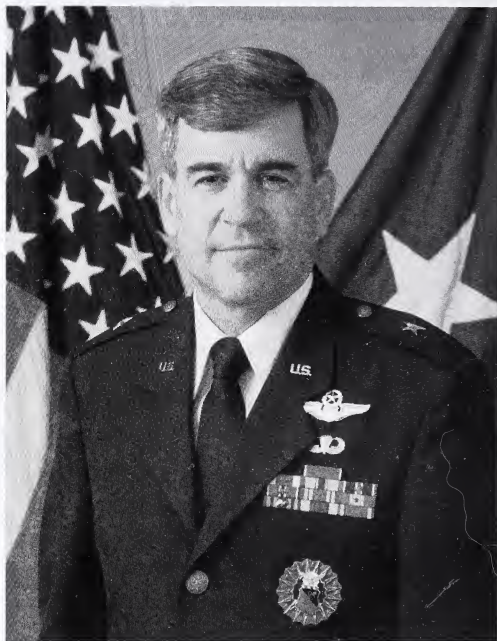
Jun 2, 1976

First Lieutenant

Jun 2, 1978



<b>Captain</b>	<b>Jun 2, 1980</b>
<b>Major</b>	<b>May 1, 1985</b>
<b>Lieutenant Colonel</b>	<b>Jun 1, 1989</b>
<b>Colonel</b>	<b>Feb 1, 1994</b>
<b>Brigadier General</b>	<b>Jun, 1999</b>



**Brigadier General David A. Wagie**  
**Dean of the Faculty**

Brigadier General David A Wagie is the Dean of the Faculty, United States Air Force Academy, Colorado Springs, CO. He commands the 887 member Dean of the Faculty mission element and oversees the annual design and instruction of more than 400 undergraduate courses to 4,000 cadets in 25 academic disciplines. He also leads and supervises 10 support staff agencies and directs the operation of faculty resources involving more than \$250 million.

He entered the Air Force in 1968 as a member of the 14th Graduating Class of the United States Air Force Academy, graduating as a Distinguished Graduate in 1972. He flew as a KC-135 Research Pilot. Later, at the Air Force Academy, he served as an Associate Professor and Deputy Head of Astronautics. He also held positions as Deputy Commandant, Permanent Professor for Military Instruction, and Director of the Center for Character Development. While at the Academy, General Wagie also served as a T-41 Instructor Pilot and currently flies as a T-41 pilot.

General Wagie is married to the former Susan Kuczenski. They have three children: Angela, Megan, and Tiffany.

## **Education:**

- 1972 Distinguished graduate Bachelor of Science degree, U.S. Air Force Academy, Colorado Springs, CO.
- 1973 Master of Science degree in Aeronautics and Astronautics, Stanford University, CA.
- 1977 Master of Science degree in Systems Management, U. of Southern California, Plattsburg AFB, NY extension.
- 1977 Distinguished graduate Squadron Officers School in residence, Maxwell AFB, AL.
- 1984 Doctorate in Aeronautics and Astronautics, Purdue University, IN.
- 1987 Distinguished graduate Air Command and Staff College in residence, Maxwell AFB, AL.
- 1988 Air War College, Ft. McNair, MD.

## **Assignments:**

1. Jun 1972 - Apr 1973, Pilot Trainee, 3526th Student Squadron, Williams AFB, AZ.
2. Apr 1973 - May 1974, Pilot Trainee, Williams AFB, AZ.
3. Jun 1974 - Oct 1974, Pilot Trainee, Castle AFB, CA.
4. Nov 1974 - May 1979, Pilot, KC-135, and Squadron Executive Officer, 310 Air Refueling Squadron, Plattsburgh AFB, NY.
5. May 1979 - May 1981, Instructor, Department of Astronautics and T-41 Instructor pilot, U.S. Air Force Academy, CO.
6. May 1981 - Jun 1984, Student, Purdue University, IN.

7. Jun 1984 - Jun 1985, Research Pilot EC-135, and Squadron Director of Test Operations, 4952nd Test Squadron, Wright Patterson AFB, OH.
8. Jun 1985 - Jun 1986, Research Pilot EC-135, and Deputy Chief, Aircraft and Avionics Division, 4950th Test Wing, Wright Patterson AFB, OH.
9. Jul 1986 - May 1987, Student, Air Command and Staff College, Maxwell AFB, AL.
10. Jun 1987 - Jul 1992, Associate Professor and Deputy Head, Department of Astronautics and T-41 Instructor pilot, U.S. Air Force Academy, CO.
11. Jul 1992 - Jun 1994, Permanent Professor and Deputy Commandant for Military Instruction, and T-43 pilot, U.S. Air Force Academy, CO.
12. Jun 1994 - Jul 1996, Director, Center for Character Development and T-43 pilot, 34th Training Wings, U.S. Air Force Academy, CO.
13. Jul 1996 - Jun 1998, Vice Dean of the Faculty, and T-43 pilot, U.S. Air Force Academy, CO.
14. Jun 1998 - present, Dean of the Faculty, and T-41 instructor pilot, U.S. Air Force Academy, CO.

### **Flight Information:**

Rating: Command Pilot

Flight hours: 2,300

Aircraft flown: T-37, T-38, T-41, T-43, KC-135, EC-135, NKC-135, C-135

### **Major Awards and Decorations:**

Legion of Merit

Meritorious Service Medal with one oak leaf cluster

Air Force Commendation Medal

Air Force Outstanding Unit Award

National Defense Service Medal

Outstanding Military Educator Award, Department of Astronautics

### **Other Achievements:**

Officer Representative, 1991-1995, USAFA Mens Intercollegiate Basketball Team.

Officer Representative, 1995-1996, USAFA Men's Intercollegiate Football Team

Academy Representative, 1994-1996, Defense Advisory Committee on Women in the Service (DACOWITS)

Chairman, 1996-1998 Superintendent's Evaluation Committee (Preparatory School oversight)

## Effective Dates of Promotion:

Second Lieutenant	Jun 7, 1972
First Lieutenant	Jun7, 1974
Captain	Jun 7, 1976
Major	Feb 1, 1984
Lieutenant Colonel	Oct 1, 1988
Colonel	Mar 11, 1993
Brigadier General	Jul 1, 1998

Current as of August 1998



**Colonel Randall W. Spetman**  
**Director of Athletics**

Colonel Randall W. Spetman is the Athletic Director, United States Air Force Academy, CO. He is responsible for the extensive 27-sport Academy athletic and physical education program.

He was Born 30 December, 1952 in Council bluffs, Iowa and graduated from Abraham Lincoln High School in Council Bluffs, IA in 1971. He received his commission in 1976 from the United States Air Force Academy where he earned a Bachelor of Science Degree in Civil Engineering. Upon graduation from the Academy, he served as an assistant football coach at the Academy. In 1984 he earned a masters in Management and Supervision from Central Michigan University. In 1994 he attended the National War College and earned a masters degree in National Security Strategy.

## **Education:**

- 1976 Bachelor of Science degree, United States Air Force Academy, Colorado Springs, CO
- 1981 Squadron Officer School, distinguished graduate
- 1984 Masters in Management and Supervision, Central Michigan University, MI
- 1989 Air Command and Staff College top performer
- 1994 Masters in National Security Strategy, National War College, Ft Mcnair, VA

## **Assignments:**

1. June 1976 - July 1977, Candidate Counselor Recruiter Specialist, United States Air Force Academy Colorado Springs, CO
2. July 1977 - July 1978, UPT Student, Williams AFB, AZ
3. July 1978 - November 1978, Student, Combat Crew Training School, Fairchild AFB, WA
4. November 1978 - July 1979, KC 135 co-pilot, 92nd Air Refueling Squadron, Fairchild AFB, WA
5. July 1979 - June 1980, K 135 co-pilot, 92nd Air Refueling Squadron, Fairchild AFB, WA.
6. June 1980 - June 1981, Wing /Base Stan Eval Instructor 92nd Air Refueling Squadron, Fairchild AFB, WA.
7. June 1981 - October 1981, Student Squadron Officer School, Maxwell AFB AL.
8. October 1981 - May 1983, Aircraft Commander KC 135, 92nd Air Refueling Squadron, Fairchild AFB, WA.

9. June 1983 - January 1984, B-1B Project Officer (ASTRA), Pentagon, Washington D.C.
10. January 1984 - June 1984, ASTRA Congressional Activities Specialist, Pentagon, Washington D.C.
11. June 1984 - February 1985, B-52 Combat Crew Training, 4017 Combat Crew Training School, Castle AFB, CA.
12. February 1985 - December 1985, Assistant Operations Officer, 46th Bombardment Squadron, Grand Forks AFB, ND
13. December 1985 - October 1986, Chief Bomber Mission Development Branch, 46th Bombardment Squadron, Grand Forks AFB, ND.
14. October 1986 - July 1988, Aide De Camp, President, National Defense University, Ft McNair, VA.
15. July 1988 - June 1989, Student, Air Command & Staff College, Maxwell AFB, AL.
16. June 1989 - July 1991, Chief, Wing Safety Division, 379th Bombardment Wing, Wurtsmith AF B, MI.
17. July 1991 - February 1992, Operations Officer, 23rd Bombardment Squadron, Minot AFB, ND.
18. February 1992 - June 1993, Commander, 23rd Bombardment Squadron, Minot, AFB, ND.
19. June 1993 - June 1994, Student, National War College, Ft. McNair, VA.
20. June 1994 - June 1995, Chief, Command and Control Division, HQ J3, Stuttgart, Germany

### **Flight Information:**

Rating Command Pilot

Flight Hours: More than 3,100

Aircraft Flown: B-52 G/H, KC-135

Major Awards and Decorations:

Defense Meritorious Service Medal

Air Force Meritorious Service Medal with two oak leaf clusters

Air Force Commendation Medal with oak leaf cluster

Air Force Achievement Medal

Combat Readiness Medal



## **Effective Dates of Promotion:**

Second Lieutenant	Jun 02, 1976
First Lieutenant	Jun 02, 1978
Captain	Jun 02, 1980
Major	Sep 15, 1981
Lieutenant Colonel	May 01, 1986
Colonel	Feb 02, 1995



**Colonel Henry B. Wilbourne**  
**USAF Academy Staff Chaplain**

Chaplain, Colonel, Henry B. Wilbourne is the Senior Staff Chaplain at the United States Air Force Academy. He was born in South Boston, VA on February 6, 1948. He graduated from Halifax County High School in 1966.

Chaplain Wilbourne entered the Air Force on May 8, 1978 after serving 5 years as a United Methodist minister in VA and SC. He has served at major command and wing levels and has augmented Numbered Air Forces' inspection teams when he was Chief, Evaluations Division at Air Combat Command.

Chaplain Wilbourne is married to the former Jackie Cole of Scottsburg, VA. They have two children: Captain John Bryant Wilbourne; an F-15 pilot stationed at Langley Air Force Base, VA; and Mrs. Salley Whitman, a graduate student in Health Administration residing in Spartanburg, SC.

## **Education:**

- 1970 - Bachelor of Arts degree in Biblical Studies, Randolph-Macon College, Ashland, VA.
- 1973 - Master of Divinity degree in New Testament, Duke University, Durham, NC
- 1985 - Air Command and Staff College (Seminar)
- 1987 - Doctor of Ministry degree in Medical Ethics, Graduate Theological Foundation, Notre Dame, IN
- 1989 - Master of Arts degree in Formative Spirituality, Duquesne University, Pittsburg, PA.
- 1998 - Air War College (in residence,) Air University, Maxwell AFB, Montgomery, AL.

## **Assignments:**

1. May 1978 - August 1980, Base Chaplain, Malmstrom AFB, MT
2. August 1980 - August 1981, Installation Staff Chaplain, Pirincli AS, Turkey
3. August 1981 - July 1983, Base Chaplain, Griffriess AFB, NY
4. July 1983 - June 1986, USAFA Preparatory School Chaplain, USAF Academy, CO
5. June 1986 - August 1988, Senior Protestant chaplain, Robins AFB, GA
6. August 1988 - August 1989, student, Institute of Formative Spirituality, Duquesne University, Pittsburg, PA
7. August 1989 - August 1992, Senior Protestant Chaplain, Misawa AB, Japan

8. August 1992 - July 1996, Chief, Evaluations Division, Office of the Command Chaplain, Air Combat Command, Langley AFB, VA
9. July 1996 - July 1997, Wing Chaplain, 100th Air Refueling Wing, RAF Mildenhall, England
11. July 1997 - June 1998, student, Air War College, Air University, Maxwell AFB, AL
12. June 1998 - present Senior Staff Chaplain, USAF Academy, CO

### **Major Awards and Decorations:**

Meritorious Service Medal with four oak leaf clusters

Air Force Commendation Medal with one oak leaf cluster

Outstanding Unit Citation with one oak leaf cluster

### **Effective Dates of Promotion:**

Captain	May 8, 1978	Lieutenant Colonel	Apr 1, 1991
Major	Oct 1, 1985	Colonel	Mar 1, 1997

## **34th Training Wing**

*Commander: Brigadier General Stephen R. Lorenz, 1973*

The 34th Training Wing (34 TRW) is responsible for most of a cadet's life here at the Academy, with the exceptions of academics, athletics, and the Air Base Wing. It, like the cadet wing, is subdivided into four different groups. These groups are: 34th Training Group (which is responsible for the daily operation of the cadet wing), 34th Education Group (which is responsible for a cadet's military education, to include Military Arts and Science classes and Aviation education), 34th Operations Group (which handles everything flying-related except the T-3 program), and the 34th Support Group (which is responsible for on-base facilities such as Mitchell Hall and Dormitory Management). Finally, although it is not considered a separate group, the Cadet Wing Center for Character Development falls under the 34th Training Wing. Cadets have access to both personnel and literature aimed at developing those qualities of character in each cadet that will be expected of him/her as an officer.

### **USAFA Core Values**

“Integrity first, Service before self,  
and Excellence in all we do.”

### **The Purpose of the Fourth Class System**

The purpose of the Fourth Class System at the United States Air Force Academy is to lay the foundation early in the cadet's career for the development of those qualities of character and discipline which will be expected of an officer. These qualities must be so deeply instilled in the individual's personality that no stress or strain will erase them.

## **Air Force Academy Mission**

“Inspire and develop outstanding young men and women to become Air Force officers with knowledge, character, and discipline; motivated to lead the world’s greatest aerospace force in service to the nation.”

## **Air Force Academy Vision**

“Recognized worldwide as the premier developer of aerospace officers...leaders with impeccable character and essential knowledge...prepared and motivated to lead our Air Force and nation.”

## **34th TRW Mission**

“To commission the BEST Air Force officers, filled with the knowledge, character, and qualities of leadership essential to a career of service to our country—Ready to Lead, Fight, and Win!”

## **34th Training Wing Strategic Goals**

### **Motivation/Attitude**

*Strategic Goal 1:* Identify and enhance those programs that motivate our graduates to seek a career of service and develop a warrior attitude—lead, fight, and win.

### **Knowledge**

*Strategic Goal 2:* Fully develop and integrate character development programs to emphasize developmental growth of each cadet’s commitment to professional values: honor, USAFA core values, and the character development outcomes.

## **Character**

*Strategic Goal 3:* Provide enhanced hands-on training in leadership and military skills essential to developmental growth of officership.

## **People**

*Strategic Goal 4:* Provide an environment that fosters individual growth through wellness and individual and group recognition.

## **Workplace**

*Strategic Goal 5:* Provide a workplace and cadet living space that is environmentally friendly, safe, and contributes positively to health and successful training outcomes.

## **Method**

*Strategic Goal 6:* Integrate the Quality Approach into the leadership style and day-to-day operations of the wing.

## **The 5 R's**

Be at the

**RIGHT PLACE**

At the

**RIGHT TIME**

In the

**RIGHT UNIFORM**

With the

**RIGHT ATTITUDE**

And always do the

**RIGHT THING**

## The Honor Oath

*“We will not Lie, Steal, or Cheat, nor tolerate among us anyone who does. Furthermore, I resolve to do my duty and live honorably, so help me God.”*

The first sentence of this oath is the USAFA Honor Code. One of the requirements for membership in the Cadet Wing is taking the oath and agreeing to live under the Honor Code. Perhaps the first time a new cadet is required to do anything individually is when each Basic Cadet solemnly affirms to abide by the Oath one at a time. This reflects the personal nature of the code to each cadet and his or her personal commitment to uphold honor with himself or herself, the rest of the Cadet Wing, and with all Academy graduates.

In a tradition begun with the acceptance of the Class of 1998, the entire wing also takes the oath while facing the incoming class at the acceptance parade. This is not only a reaffirmation of the Wing's commitment to the Honor Code, but represents our common commitment to enforce the Code amongst ourselves.

In taking the Oath, cadets pledge to place personal integrity, the interests of the Wing, and the Air Force ahead of whatever personal advantages might accrue from lying, stealing, cheating, or tolerating violations of the Code. The Honor Code is the proudest tradition of our Academy and has remained unchanged since it was first accepted by the Class of 1959 as the minimum standard. It is one of our most distinguishing characteristics, and whether or not that tradition remains viable is up to each individual to live honorably and with a sense of integrity in doing the right thing.

The Honor Code and system is administered by the Cadet Honor Committee. With representatives at the squadron, group, and wing levels, each member is elected to serve in his/her position by classmates. Cadets who are suspected of



violating the Honor Code are investigated and then have their cases heard by a board of their peers. Violators of the Code receive severe punishments, often including disenrollment.

Living under an Honor Code places no further restrictions on cadet life than that which will be expected of an officer. Living honorably is vital to effective officership, and for maintaining the trust and respect between service members. Most graduates agree, living under the Honor Code as a cadet, is one of the best ways that prepares them for all their life's interactions.

For further information about honor, refer to the Air Force Cadet Wing Honor Code Reference Handbook.



# Cadet Roles and Responsibilities

## **First Class Cadets:**

Serve as the cadet officers providing the leadership, motivation, and direction for the Cadet Wing. Demonstrate effective leadership and officership in support of unit mission objectives while preparing to be commissioned officers in the United States Air Force. Exemplify effective supervisory, instructional, and followership skills.

## **Second Class Cadets:**

Serve as the Cadet NCOs providing supervision and training for the lower two classes. Assist in providing leadership, motivation, and direction for the Cadet Wing. Act as mentor to the fourth class cadets.

## **Third Class Cadets:**

Instructor. Trainer. Role model for fourth class cadets. Demonstrate effective instructional skills in support of unit mission objectives while preparing to be supervisors in the cadet wing. Exemplify followership. Perform CCQ duties.

## **Fourth Class Cadets:**

Assertive follower. Follow the legal orders of those senior in position and rank. Demonstrate assertive followership skills in support of unit mission objectives.

# Character Development Outcomes

*The following information is meant for general guidance and critical thinking, not memorization.*

**USAFA Definition of Character:** The sum of those qualities of moral excellence which stimulates a person to do the right thing which is manifested through right and proper actions despite internal or external pressures to the contrary.

*Rationale:* The following statements of desired “outcomes” are offered to all Academy mission elements for the following purposes:

*First*, and most important, they state our aspirations. They reflect our ideals—what we would hope that every cadet and member of the Academy community strives to do and to be.

*Second*, they elaborate the core values of the institution. They serve, therefore, as the basis of institutional and self evaluation . . . the touchstone and framework to which we return when we ask why we do what we do and modify what we do in our quest for excellence. Further, they provide a shared language within which we critique ourselves and each other.

*Third*, they provide a framework for assessment of all we do as an institution. We must assess our activities to determine whether we succeed in doing what we say we strive to do. Nevertheless, it is equally important to recognize that all assessment efforts are imprecise and must always be placed in the context of the somewhat less precise, but ultimately more important, statement of our highest ideals.

**Officers with forthright integrity who voluntarily  
decide the right thing to do and do it.**

Officers with forthright integrity voluntarily decide the right thing to do and do it in both their professional and private lives. They do not choose the right thing because of a calculation of what is most advantageous to themselves but because of a consistent

and spontaneous inclination to do the right thing. Their inclination to do right is consistently followed by actually doing what they believe they should do and taking responsibility for their choices. In other words, persons of integrity “walk their talk.”

**Officers who are selfless in service to their country,  
the Air Force and their subordinates.**

Officers who are selfless know how to prioritize their loyalties so that their highest loyalty is to the moral principles reflected in the Constitution, then to the profession of arms, then to the mission, and lastly to individuals. People who serve selflessly resist the natural tendency to focus exclusively on self-serving desires and so do not take advantage of situations for personal pleasure, gain or safety at the expense of the unit or mission. They share in the danger, hardships and discomforts of subordinates. Their rank is shown by their commitment to duty and responsibility to others rather than claims of personal privilege or advantage.

**Officers who are committed to excellence  
in the performance of their personal  
and professional responsibilities.**

Officers who are committed to excellence strive to do their best in everything they are responsible for doing, both personally and professionally. They base their self-esteem and sense of accomplishment not on how their accomplishments compare with others but on how they measure up compared to a realistic appraisal of what they are capable of accomplishing.

**Officers who respect the dignity of all human beings.**

Officers who respect human dignity believe that individual differences of race, gender, ethnicity, and religion are to be valued. Officers who respect and value others act in ways which support and encourage others to develop to their fullest potential; they do

not demean or debase others. Officers who respect human dignity are accepting of those differences individuals have, and contribute to an environment where all people can achieve high productivity, full utilization of their skills, and commitment to organizational goals.

### **Officers who are decisive, even facing high risk.**

Officers who are decisive make timely and resolute decisions. They do not allow self-serving desires to prevent them from making decisions which are necessary for mission accomplishment. Officers who are decisive are not afraid to communicate their beliefs about the best way to achieve mission accomplishment to their superiors, so they do not wait to find out what the boss wants to hear before they give advice. However, decisive officers are not disloyal when their advice and recommendations are not adopted.

### **Officers who take full responsibility for their decisions.**

Officers who take full responsibility for their decisions voluntarily give full and honest accounts of their actions and decisions to those who are entitled to be informed of them. When loyalty requires them to take actions which are unpopular with their subordinates, they do not give accounts to their subordinates which blame their superiors, and they do not communicate to subordinates that they feel no personal responsibility for the decision.

### **Officers with the self-discipline, stamina, and courage to do their duty well under even the most extreme and prolonged conditions of national defense.**

Officers with these traits do what is right whether the consequences involve personal peril or potential harm to their career. Officers with a strong sense of duty also embrace the mental roughness and discipline vested in our oath of obligation

“to protect and defend the Constitution of the United States against all enemies foreign and domestic ...”

Officers understand that fulfillment of our oath may require great personal sacrifices. Officers who do their duty well, accept that our profession may require violent methods but do not glorify violence for its own sake. In essence, officers with self-discipline, stamina, and courage seek to attain the highest level of competence in our profession.

**Officers who appreciate the significance of spiritual values and beliefs to their own character development and that of the community.**

Officers with this understanding are clear in their own convictions and respect the convictions of others. They understand that their leadership role requires sensitive awareness of the role that religion plays in peoples' lives and their need to accommodate and support individuals' freedom to exercise faith.

### **Human Relations Oath**

I will show respect for and honor all people regardless of their race, religion, gender, national origin, color, and status. It is my responsibility to counsel my fellow cadets on any behavior that I believe adversely affects the positive human relations environment that is guaranteed to every person in the United States Air Force.

### **Human Relations Principles**

**Respect** - Consideration and appreciation for another's beliefs, opinions, and feeling.

**Dignity** - Treating all people in a manner that reflects their worth as a human being.

**Courage** - Courage to do the right thing for the right reasons.

## History of the Air Force Academy

Following the organization of the United States Air Force as a separate service in 1947, work commenced toward the realization of yet another dream—its own academy.

In 1948, Secretary of Defense James Forrestal appointed a Service Academy Board to review the capabilities and facilities of the Military and Naval Academies and make recommendations for the establishment of an academy for the Air Force. On 1 April 1954, 4 years after the Board's report was received, Congress authorized the construction of an Air Force Academy. The Air Force had been preparing for this action. Forty officers and civilian educators headed by Colonel Eiler at the Air University, Maxwell Air Force Base, Alabama, had developed the curriculum for the Academy several years in advance. Secretary of the Air Force Harold Talbott personally selected the location for the Academy on the basis of the Colorado site's notable advantages of a quiet, isolated location still accessible to large towns, favorable weather for training, and the fact that the State of Colorado offered one million dollars for the purchase of the land.

Over 340 architectural firms competed for the commission of designing and constructing the Academy. Skidmore, Owings, and Merrill, Architects and Engineers, finally won. Their original plans were deemed "too modernistic" by Congress. The "accordion-like" chapel was the central object of controversy. Not only Congress, but also such well-known American architects as Frank Lloyd Wright considered the design to be in poor taste. Before 126 million dollars was allocated for construction, the design had to be modified to more traditional lines of architecture, a change which increased the final building cost by four times. The approved layout of the newest Academy was finally unveiled on 14 May 1955.

On 11 July 1955, the same year construction began, the first class of 306 men was sworn in at a temporary site at Lowry Air Force Base, Denver. Lt General Hubert R. Harmon, a key figure in the development of the Academy since 1949, was recalled from retirement to become the first Superintendent. Two years later Maj

General James E. Briggs took over as the Academy's second superintendent. During his tour, on 29 August 1958, the Wing of 1145 cadets moved to its present site from Denver. Less than a year later the Academy received accreditation. On 3 March 1964, the authorized strength of the Cadet Wing was increased to its present number of 4,417 cadets. In 1995 Congress capped the cadet strength at 4,000 cadets and 40 international students effective 30 September 1998.

The 18,000 acres which comprise the Air Force Academy are located on the east slope of the Rampart Range; 7,258 feet above sea level. The base is divided into three major areas: the cadet area, the base community area, and the service and supply area.

The cadet's life is centered around the nine major buildings in the cadet area. These buildings have been named after Air Force officers who were particularly vital to the history of the Air Force and the Academy.

**Vandenberg Hall**, a cadet dormitory, contains 1,320 cadet rooms, the Cadet Store, the Wing honor offices, the Center for Character Development, as well as various rooms for professional activities and recreational clubs. The dormitory was named after General Hoyt S. Vandenberg, the second United States Air Force Chief of Staff, who served from 1948 until 1953. His efforts strengthened the position of the Air Force and aided in the development of today's forces.

A second dormitory, **Sijan Hall**, was dedicated on 31 May 1976. It increased the total number of cadet rooms to 2,233. It also contains the tailor shop. Sijan Hall was dedicated and named in honor of Lance P. Sijan, Class of 1965. Captain Sijan was the first USAFA graduate to receive the Medal of Honor, awarded to him posthumously for heroism as a POW in North Vietnam.

**Fairchild Hall** contains both academic classrooms and administrative facilities. The library on the north end of Fairchild Hall now has over 700,000 volumes. The academic building was named after the first commander of the Air University, General Muir S. Fairchild, who later became Vice Chief of Staff, in recognition of the fine work done by the Air University and General Fairchild on improving educational opportunities in the Air Force. The newest addition to Fairchild Hall is the **Consolidated Education and**



**Training Facility (CETF).** It houses additional laboratories, classrooms, cadet clinic, and dental clinic.

**Mitchell Hall,** the cadet dining hall, has facilities for serving meals to 4,400 cadets simultaneously. Mitchell Hall was named in honor of Brig General "Billy" Mitchell. He was the most outspoken and farsighted American advocate of air power during World War I and the period following. He sacrificed his career for the advancement of air power.

**The Cadet Chapel,** dedicated in September 1963, is the architectural high point of the Academy. It can seat 1,200 for Protestant services, 600 for Catholic services, and 100 for Jewish services.

**Arnold Hall,** was built to serve as a Student Union for cadets. It was named after the first General of the Air Force, Henry H. Hap Arnold who was the Commanding General of the Army Air Forces during World War II and fought vigorously for a separate Air Force. Arnold Hall ("A" Hall) houses offices and shops for elements of the 34th Cadet Activities Flight and the 10th Services Squadron, including a Package Stop for shipping and receiving packages, a Specialties Shop for purchasing gifts, and Cadet Treats which delivers cookies, cakes, and fruit baskets to cadets. Also in Arnold Hall, one finds the Athletic Services' gift shop, and 10th Services Squadron's Arnie's cafeteria. Other activities center around the actual running of the facility, such as special events scheduling and facility maintenance. The theater and related services occupy a large part of the building. In the theater, cadets hear lectures from prominent guest speakers and enjoy first-rate entertainment. The Entertainment Office contracts Broadway plays and major entertainers for entertaining cadets and the military/civilian communities in the front range area.

Arnold Hall also provides the ballroom for cadet formal balls and informal dances, two banquet rooms, Hap's Place for upper class cadets 21 years old and older, and game rooms for all cadets. Cadet leisure activities include formal events planned by the Community Centers and Cadet Entertainment and informal movies and games.

Arnold Hall is managed by the 34th Cadet Activities Flight Commander, under the command of the 34th Services Squadron.

**Harmon Hall**, the administrative center of the Academy, houses the offices of the Superintendent and his staff. It was named in tribute to Lt General Hubert R. Harmon, who worked from 1949 until 1954 on plans for an Air Force Academy and who was instrumental in getting Congressional approval for the Academy.

Cadets at the Air Force Academy have available to them some of the finest facilities in the nation for physical activity. The Cadet Gymnasium, surrounded by athletic fields, contains several gyms, two swimming pools, squash and handball courts, and facilities for playing nearly every sport. The cadet Field House is the center of many Academy sports and activities. The Field House is divided into three areas. The largest is the indoor track which is covered with astro-turf and is used by various sports for indoor practice. The second section has a hockey rink with seating for 2,600 spectators, and is used on weekends for recreational skating by cadets and Academy personnel. The last area is Clune Arena, which has a basketball court with seats for 6,000 and also houses intercollegiate wrestling matches. Clune Arena is named for Colonel John J. Clune, Director of Athletics from 1975 until 1991. Colonel Clune was instrumental in bringing Air Force athletic programs to the forefront of the national collegiate sports scene.

There are several other notable sites in the cadet area and on the Academy grounds.

**Stillman Field** is the location of many Cadet Wing parades. It was dedicated in honor of Major General Robert M. Stillman, who served as the first Commandant of Cadets from 1954 until 1958. Maj General Stillman is credited for creating the organization of the Cadet Wing, integrating the Cadet Honor Code into the Academy educational process, and developing airmanship programs.

**Doolittle Hall** is the Association of Graduates headquarters, dedicated in 1992. It is located on Academy Drive and contains offices for associate AOG staff and has room to host several hundred people for social events.

**Falcon Stadium**, the site of all home football games, is located on the east side of the Academy, away from the cadet area.

**Pine Valley Airfield** is located in the southeast corner of the base. There are facilities for cadets to participate in the soaring, parachuting and T-3 flight training programs, as well as the Academy's Aero Club.

## Building Colors

The following are the significant aspects of the building colors:

**Red** - 1. Administration, Commandant or Dean areas  
2. The sun

**Blue** - 1. Academic functions  
2. The sky

**Yellow** - 1. Housing  
2. The grasses on the plains

**Silver** - 1. Aluminum in the buildings was originally supposed to be stainless steel to mirror aircraft technology.

Originally green was supposed to be the fourth color (instead of silver) to symbolize the trees in the forest. However, since green is not a primary color, the original architects went with red, blue and yellow to start. In modern architecture, the 3 primary colors are prevalent. since the Academy was to be reflective of modern architecture, red, blue and yellow were chosen for the original Academy colors.

## Displays in the Cadet Area

Cadets often escort guests on tours in the cadet area. From Parents Weekend during their Fourth Class year to graduation, cadets take pride in showing off the beauty and tradition of USAFA. They also take pride in demonstrating their knowledge of the aircrafts, buildings, and displays in the cadet area.

### Aircraft

#### *McDonnell-Douglas F-15A Eagle*

*Location: SW corner of the terrazzo*

This 1976 model F-15 flew most of its career with the 48th Fighter Interceptor Squadron (FIS) located at Langley AFB, VA. While it was with the 48th FIS, it flew intercept missions for the Southeast Air Defense Sector. It flew its last few missions painted in the colors of Tyndall AFB, FL before retiring on 30 November 1992. It was donated to the Academy in the spring of 1993.

#### *General-Dynamics F-16A Fighting Falcon*

*Location: NW corner of terrazzo*

Originally a non-flying test bed aircraft, this F-16 was donated from AFSC at Wright-Patterson AFB, OH and is presently painted in the colors of the 57th Fighter Weapons Wing located at Nellis AFB, NV.

#### *Republic F-105D Thunderchief*

*Location: NE corner of the terrazzo*

Assembled at McCellan AFB, CA from parts of at least 10 sister aircraft that saw combat duty in Southeast Asia, this aircraft has served as a permanent memorial at the Academy since 1968.

*McDonnell-Douglas F-4D Phantom II*

*Location: SE corner of the terrazzo*

This is the only aircraft credited with six MiG kills since the Korean War. Captain Steve Ritchie, Class of 1964, made his first and fifth kills in this aircraft. It was presented to the Academy in 1986.

*Northrop X-4 Bantam*

*Location: North of Arnold Hall*

One of two experimental aircraft built during the late 1940s, this tailless aircraft was donated in 1956 by the USAF Museum located at Wright-Patterson AFB, OH.

*Martin-Marietta SV5-J Lifting Body*

*Location: Near Aeronautics Laboratory*

Built in 1966, the SV5-J was capable of high-speed, maneuverable flight from altitudes to landings on conventional runways. Using its entire body to provide "lift," the SV5-Js mission was to explore flight characteristics and to develop pilot techniques for Space Shuttle reentry flights. It was given to the Academy in 1981 by Martin-Marietta.

*Northrop T-38 Talon*

*Location: Thunderbird Airmanship Overlook*

This trainer aircraft, similar to those used in Undergraduate Pilot Training and formerly flown by the USAF Thunderbirds, was given to the Academy by Randolph AFB, TX in 1973.

*Boeing B-52D Stratofortress*

*Location: Intersection of North Gate and Stadium Boulevards*

This bomber, nicknamed the "Diamond Lil," saw over 200 combat missions in Southeast Asia, eight of which were during Linebacker II. In one of the missions during Linebacker II, tail gunner A1C Albert C. Moore shot down a MiG-21.

### *North American F-86F Sabre*

*Location: AFA airfield*

The F-86 was the first American fighter with swept wings. During the Korean War, although inferior to the MiG-15, it achieved a better than a 10-1 kill ratio over the MiG-15. This particular aircraft was flown by the Argentine Air Force and was given to the Academy in 1988.

### *Lockheed F-104A Starfighter*

*Location: AFA airfield*

This aircraft was one of the first 12 F-104s off the assembly line. It was used in the flight test program at Edwards AFB, CA. This F-104 was given to the Academy in 1967.

### *North American F-100 Super Sabre*

*Location: front of Prep School*

Nicknamed the "Spirit of Saint Louis II," Brigadier General Robinson Risner reenacted Charles Lindberg's flight across the Atlantic with this airplane. It is dedicated to Brigadier General Risner for his dedication to the Air Force and his quest for excellence.

## **Fairchild Hall**

### *Medal of Honor Wall*

Located on the west side of the second floor, this wall features the portrait of the person and a description of the act that qualified them for the Congressional Medal of Honor. Fifty-nine Medals of Honor have been awarded to Air Force members: 4 in WWI, 38 in WWII, 4 in Korea, 12 in Vietnam, and one to Charles Lindberg for his trans-Atlantic flight.

### *Memorial Hallways*

The hallways on the second floor commemorate major victories and campaigns that mark Air Force history. The hallways go in chronological order from north to south: St. Mihiel, Doolittle Raid, Big Week, Berlin Air Lift, MiG Alley, Linebacker II, and Desert Storm.

### *Orville and Wilbur Wright Statues.*

These bronze busts were donated to the Academy by Col Milton Seaman, USAF, Ret. in April of 1979. Orville lived from 1871-1948, and Wilbur lived from 1867-1912.

### *Brigadier General Robert F. McDermott Display.*

The first permanent professor and Dean of Faculty from 1956-1968, this man is known as the "Father of the Curriculum." The display includes a portrait and a book on his life and accomplishments.

### *Rifle Collection.*

Surrounding the spiral stairway in the library is the personal collection of Lt. General Albert P. Clark, sixth Superintendent of the Academy. This collection of military shoulder arms includes examples of principle types issued to US troops during and since the American Revolution. It was donated on 14 March 1973.

### *Jacqueline Cochran Display.*

Located at the base of the spiral stairway in the library, this case displays the WASP founder's trophies and awards. Among those are the Distinguished Service Medal, the Legion of Merit, and the Distinguished Flying Cross with two oak leaf clusters. It was donated by Ms. Cochran in 1975. Ms. Cochran's memorial service was held in the Cadet Chapel on 6 November 1980.

### *Colonel Richard Gimbel Aeronautical Library.*

Located on the sixth floor of the library, this elegant library holds more than 6,000 rare volumes dating from before 1501 to the present, as well as more than 14,000 aeronautical prints, etchings, coins, and other memorabilia of flight. The Gimbel Library is a truly priceless collection unique to the Academy.

### *Other displays in the Library*

The Library also contains portraits of all AF Chiefs of Staff, original aviation art by Henry Farre, photographs of all Secretaries of the Air Force, a bust of Stuart Symington, a collection of all the class rings, and several other pieces of art.

## **Sijan Hall**

### *Lance Sijan Memorial*

Located on the NE corner of the third floor, the case contains many items of Sijan's personal life and cadet career. Included are uniforms, original Sijan artwork, photographs, and cadet memorabilia. The memorial was dedicated Memorial Day, 31 May 1976.

### *Lance Sijan Portrait*

Painted by Maxine McCaffery especially for Sijan Hall, this full size portrait of Lance Sijan hangs in the far NE stairwell on the terrazzo level. It was created with the use of photographs of Capt. Sijan, and fighter pilots from Edwards AFB as models. It was also dedicated on Memorial Day, 31 May 1976.

## **Vandenberg Hall**

### *Wall of Aces*

Although incomplete, this wall contains pictures of Air Force Aces recognized by the Air Force. It is located on the second floor next to the Cadet Store.

## **Air Gardens**

### *Eagle and Fledglings Statue*

Located at the south end, this two ton statue was given to the Academy from personnel of Air Training Command in 1958. The quotation on it reads "Man's flight through life is sustained by the power of his knowledge," by Austin "Dusty" Miller.

### *Risner Trophy*

Named after Brigadier General Robinson Risner. He was shot down over North Vietnam in 1965 and spent 7 years as a POW. This marble and bronze trophy recognizes the outstanding graduate each year from the Tactical Fighter Weapons School at Nellis AFB, Nevada.



### *Brigadier General William "Billy" Mitchell Memorial*

Located at the south end of the Air Gardens, this bust in honor of General Mitchell was presented in May 1989 from Lt Col Jerry McKenna in gratitude for his two sons being educated here.

### *General O'Malley Memorial*

This bronze bust, located at the south end of the Air Gardens, is in honor of General Jerome F. O'Malley. He was one of the first air training officers at the Academy and later became Commander-in-Chief of Pacific Air Forces and Commander of Tactical Air Command. It was presented to the Academy by Mr. H. Ross Perot in 1987.

### *General John D. Ryan Memorial*

This bronze bust is located at the south end of the Air Gardens in honor of the Seventh AF Chief of Staff, General Ryan. It was presented on 3 November 1989 by his classmates (Class of 1938, USMA).

### *War Memorial*

Located at the north end of the Air Gardens near the flagpole, this polished marble monument is a memorial to the USAFA graduates who have lost their lives in combat. The inscription at the top reads, "In memory of our fellow graduates who have fallen in battle." It was presented to the Cadet Wing by the Association of Graduates in 1970.

## **Cadet Honor Court**

### *Tuskegee Airman Memorial.*

This bronze statue, located at the south end of the honor Court, is in honor of the black airmen of WWII. It was presented by the Hook-Jones Chapter (Colorado) of the Tuskegee Airmen Inc. on 6 May 1988. A quotation on the statue reads "They rose from adversity through competence, courage, commitment and capacity to serve America on silver wings and to set a standard few will transcend."

### *Lt General Hubert R. Harmon Memorial*

This bronze bust located in the center of the Honor Court is in honor of Lt General Hubert R. Harmon. It was donated by the Class of 1959 at their 25th reunion in 1984.

### *WWI Overseas Fliers Memorial*

The bronze wings located at the south end of the Honor Court are in honor of WWI overseas fliers. Ira Milton Jones, president of the WWI Overseas Fliers Association, donated this gift on 11 November 1984.

### *Women Air Force Service Pilots Memorial*

This memorial was dedicated on 4 September 1997. The quotation on it reads, "I, salute ALL WASPS. You have been pioneers in a new field of wartime service. You. have shown that you can fly wingtip to wingtip with your brothers."

General Henry H. "Hap" Arnold

### *P-51 Mustang Memorial*

Located at the south end of the Honor Court, the 3/10th scale cast bronze replica exemplifies the P-51 as the best all-around fighter of its day. It was donated on 3 July 1989 by the P-51 Mustang Pilots Association.

### *P-40 Warhawk Memorial*

Located in the SW corner of the Honor Court, this memorial was dedicated on 21 September 1994 by the P-40 Warhawk Pilot Association. It was dedicated in honor of those people who designed, built, maintained, and piloted the Flying Curtiss P-40 Warhawks.

### *P-47 Thunderbolt Memorial*

This 3/10th scale cast bronze replica of Republic P47D25, 12 ft wingspan. Dedicated in June 1993 by the P-47 Thunderbolt Pilots Association.

### *P-38 Lightning Memorial*

This memorial was donated by the P-38 National Association in August 1992.

### *B-24 Liberator Memorial*

This 1/6<sup>th</sup> scale bronze replica of the Liberator was donated by the B-24 Groups Association, on 25 September, 1998 in memory of the 18,000 Liberators that flew in every theater during World War II. The inscription on the sculpture reads, "To honor the brave Airmen we lost, the Valiant ones who survived, all who designed, produced, maintained and flew this stalwart aircraft." (Friedberg)

### *B-17 flying Fortress Memorial*

Donated by 305th BG (Bombing Group) Memorial Association, on 22 August, 1997.

All of the Warbird Memorials, known to those who donated them to the Academy as "*The Study Hall*," stand upon the Honor Court. Each warbird group gave these sculptures hoping to affect and educate those who visit and study at the Academy. They are given as a sign of peace by the men and women who won our freedom in World War II. All are the works of sculptor Robert Henderson whose only son graduated from the Academy in 1992.

### Works Cited

Maffeo, Associate Director of USAF Academy Library. Personal interview. 28 Oct, 1998.

Friedberg, Ardy. B-24 Liberator fliers honor their old friend. Colorado Springs Gazette. 25 Oct, 1998.

## Doolittle Hall

*Pegasus Statue*. Located outside Doolittle Hall, this marble statue of the mythical winged horse weighs about 8.5 tons. The original stands at the Italian War College in Florence, Italy. The statue was presented as a gift by the Italian government and dedicated in 1959.

## Arnold Hall

### *General Henry H. "Hap" Arnold Statue*

Located outside in front of Arnold Hall, this bronze full body statue sculpted by Glenna Goodacre was dedicated on 5 November

1993 before the Air Force 4 star generals. It honors the only General of the Air Force appointed by Congress in 1949.

### *Baffin*

The Academy mascot from 1965-1978, Baffin was prepared by the World Wildlife Museum and presented to the Cadet Wing on 8 August 1979. Baffin is a White Phase Arctic Gyr falcon and has been described as “a symbol of Free Flight with Discipline.”

### *1st Lt. Karl W. Richter Memorial*

Located outside Richter Lounge, this memorial to the youngest graduate to shoot down a MiG consists of an oil painting by Maxine McCaffery and a display of Richter's medals.

### *USAFA Graduates in Space*

In honor of all USAFA graduates who have participated in the space program.

### *First Four Classes*

This case, located at the west end of the ballroom, contains the first Academy Crest, the Class Flags, Polaris Yearbooks, and Contrails of the classes of 1959-1962.

### *Air Force Order of the Sword*

This is an award presented by enlisted members to an officer who they feel epitomizes officership. It consists of three crossed sabers and a shield with a crest. The two scrolls, one with a description of the Order, and the other with a list of the winners, are on either side of the crest. This crest was given by General Charles A. Gabriel on 22 March 1986.

### *Doolittle Tokyo Raiders Memorial*

Located on the west wall of Arnold Hall near the Charge of Quarters desk, this memorial contains a silver goblet for each of the flyers that participated in the famous Tokyo Raid. After a raider dies, the cup with the flyer's name engraved on it is turned over. When only two remain upright, they will split the bottle of cognac at the center of the case in a solemn salute to their achievement and their comrades.

### *Hap Arnold Memorial*

This display contains many of General Arnold's personal collections and awards. It was given to CS-31 by members of the Arnold family.

### *Jabara Award for Airmanship*

In memory of Col James Jabara, this plaque contains all of the graduates' names who have earned the award by demonstrating superior performance directly associated with aerospace vehicles.

### *Women in the Air Force*

This display located on the right side of the theater main entrance is a salute to the first women graduates of the Academy. Included are Michelle D. Johnson, Class of 1981, first woman Wing Commander; Terrie A. McLaughlin, Class of 1986, first woman to graduate first Order of Merit in her class; and Susan J. Helms, Class of 1980, first woman graduate in space.

## **Cadet Squadron Awards**

The following awards are given to the outstanding cadet squadron at the end of each academic year and are presented at the Organizational Awards Parade during June Week.

*Space Command Award for Military Proficiency* - presented to the squadron which does the best militarily, in honor of Colonel John H. Fowler, Jr.

*Gillen Slezak Memorial Trophy* - awarded to the squadron with the best performing intercollegiate athletes.

*John J. Malanphy Trophy* - presented to the best squadron in intramural athletics.

*Academic Achievement Trophy* - presented to the best academic squadron by Air Training Command.

## **Other Awards:**

*Glenn H. Curtiss 2nd Perpetual Trophy* - contains all the names of the Cadet Wing Commanders.

*AFA Foundation Award for Excellence in Leadership and Scholarship*

*Superintendent's Award for Athletic Excellence*

## **Cadet Chapel**

### *Class Wall*

The plaques on the Chapel Wall represent the crests for each USAFA graduating class. The center position on the wall is occupied each year by the crest of the next graduating class. Hence, the crest of the Class of 2000 is now in the center position.

### *Memorial Tree Grove II*

Located west of the Cadet Chapel was donated in memory of C1C Scott Macvean Manly. The grove was approved 29 March 1990. and the trees were planted through donations in May of 1991.

## **Cadet Field House**

### *Minuteman III*

Located in the front of the Cadet Field House, this missile was donated to the Academy in the fall of 1971 by the Strategic Air Command. The first MM III became operational on 30 June 1970 at Minot AFB, ND.

## **Academy Cemetery**

### *Polaris Tower War Memorial*

Located at the west side Academy Cemetery, this memorial was given to the Cadet Wing by the American Legion, Department of Colorado. Dedicated on Memorial Day 1981, it stands "in honor of all who have served" our country. It weighs 5000 lbs. and stands 40'6" high.

## Distinguished Graduates

Although the Air Force Academy is relatively young in comparison to other service academies, our graduates are establishing a strong tradition of dedication and excellence that has brought many of them national recognition. The young men and women who pass through the Academy come from many walks of life, different ethnic backgrounds, and a variety of religions. The Academy serves as a rallying point for these different aspects of American culture; and from this will come the leaders of tomorrow for the Air Force and the nation. The qualities that cadets develop in the diverse programs of the Academy will help them in their future profession. This is exemplified by the records of our distinguished graduates. No single list or short essay can adequately describe the deeds of all graduates. However, the few outstanding officers cited therein should serve as standards of a level of achievement that all cadets can strive to attain. As you read each person's accomplishments think about what it took to attain these goals. Think about the characteristics each of these people have and how you can develop those same qualities. Finally, think about where each of these people came from. They came from the same place where you are now. Remember that each one of the people you are reading about all started out as a fourth class cadet at the United States Air Force Academy. Let their stories motivate you to strive for similar successes.

The first Academy graduate promoted to the rank of four-star general was a 1959 graduate by the name of Hansford T. Johnson. General Johnson's distinguished career included 423 combat missions as a forward air controller in Southeast Asia. General Johnson retired as the Commander in Chief of the United States Transportation Command and Military Airlift Command.

Another noteworthy member of the Class of 1959 is Retired Lieutenant General Bradley C. Hosmer. After graduating as the number one cadet in the General Order of Merit, he went to Oxford on a Rhodes Scholarship. When finished with his Rhodes program, Lt General Hosmer became an air liaison officer with the

First Cavalry Division in Vietnam. He was also one of the first four graduates promoted to Colonel. When he retired, Lt General Hosmer was serving as the Superintendent of the Air Force Academy. He was the first graduate to come back to the Academy as Superintendent, a position he held from 1991-1994. Lt General Hosmer has earned the Distinguished Flying Cross and two bronze stars.

Retired Colonel Karol J. Bobko, Class 1959, was the first graduate to enter the space program. After completing training at the Air Force's Aerospace Research Pilot School at Edwards AFB, he was assigned to the Manned Orbiting Laboratory Program in August 1969. He commanded Space Shuttle Challenger on STS-6. In 1983, Colonel Bobko received the Jabara Award for Airmanship. The Jabara Award is given each year to the Academy graduate whose accomplishments demonstrate superior performance in fields directly associated with aerospace vehicles.

Retired Lieutenant General Robert D. Beckel, Class of 1959, distinguished himself on active duty and as a cadet. He is the only person to have served as Cadet Wing Commander twice. After pilot training he flew F-100 and F-105 aircraft, completing 280 combat missions in Southeast Asia. He also served a tour with the Air Force Thunderbirds' aerial demonstration team. Lt General Beckel served as commandant of Cadets from 1981-1982.

The first graduate to become the Chief of Staff of the Air Force is a 1963 graduate by the name of General Ronald R. Fogleman. Gen Fogleman flew F-100's in Vietnam and after his tour came back to the Academy to teach history. Some of his decorations include the Silver Star, distinguished flying Cross with cluster, Purple Heart, and the Air Medal with 17 clusters. One hundred and forty-one graduates gave their lives in Vietnam. Following are the stories of several graduates who made the ultimate sacrifice during that struggle.





### **First Lieutenant Karl Richter**

First Lieutenant Karl Richter, Class of 1964, became the youngest Air Force pilot to down a MiG in combat. He showed an attitude of hard work and love of country few could match. During his tours flying the F-105D, Lieutenant Richter volunteered for

difficult missions such as SAM suppression and strike missions deep in North Vietnam. Lieutenant Richter completed his first tour of 100 missions and then signed up for an additional tour. On his 198th of 200 missions Lieutenant Richter's plane was hit by ground fire, and he was forced to eject. Due to injuries sustained from the ejection Richter died enroute to the hospital. For his gallantry First Lieutenant Karl Richter received the Air Force Cross and a Purple Heart in addition to 22 Air Medals, Vietnamese Government decorations, and the Jabara Award.

Another graduate who lost his life while performing meritoriously was Captain Harlow K. Halbower, Class of 1959. His long list of decorations includes the Silver Star, the Distinguished Flying Cross, Purple Heart, and the Air Medal with 11 clusters. Captain Halbower died while serving as a Forward Air Controller when his O-1F was hit by ground fire on a mission 15 miles west of Saigon.

The Air Force Academy has produced several graduates that have done exemplary acts, but they could not have gone that far without those fallen graduates that came before them. The first graduate to die in combat was Lieutenant Valmore Bourque. He was killed in action while flying as a C-123 aircraft commander on a combat mission northeast of Saigon. He was also the first cadet to take the oath of allegiance in the first entering class.

One of the most striking examples of courage and love of freedom can be seen in Lance Peter Sijan, Class of 1965. On 9 November 1967, Captain (then 1st Lieutenant) Sijan was flying in the back seat of an F-4 on a bombing pass over North Vietnam, when his aircraft was hit and exploded. Captain Sijan suffered a skull fracture, a mangled right hand, and a compound fracture of his left leg. The next day after regaining consciousness he heard friendly aircraft flying over head. Using his radio he made contact with the pilot and a rescue operation was begun. Despite his serious wounds, Captain Sijan remained conscious and calm while directing rescue aircraft to his position during an unsuccessful rescue mission. After 45 days of crawling on his back over sharp limestone karsts, the North Vietnamese found Sijan and took him prisoner. Sijan managed one escape by overcoming his guard, but

was recaptured within hours. During his three months of captivity, he endured severe torture by interrogators and constant beatings from guards for his relentless efforts to escape.



**Captain Lance P. Sijan**

In January of 1968, Lance Sijan succumbed to his injuries as a prisoner of war in Hanoi. He never gave up his quest for freedom, the freedom for which he fought and ultimately died. On 4 March 1976, President Gerald R. Ford awarded the Medal of Honor to Captain Sijan posthumously for his "Extraordinary heroism and intrepidity above and beyond the call of duty at the cost of his life. . ." Three other former prisoners of war, all living, also received Medals of Honor from President Ford on that same day. Two of the men were Rear Admiral James B. Stockdale and Colonel James E. Day. Colonel Day wrote to the *Airman* magazine:

Lance was the epitome of dedication, right to death!  
When people ask about what kind of kids we should start

with, the answer is straight, honest kids like him. They will not all stay that way, but by God, that's the minimum to start with.

There were many other Academy graduates whose courage, skill, and leadership made them heroes as well as examples for all of us. The first graduate to down a MiG was a 1959 graduate by the name of Captain (now retired Colonel) Robert E. Blake. Captain (now Brigadier General) Richard S. Ritchie, Class of 1964, was the first Air Force ace of the Vietnam war. A distinguished fighter pilot, he earned the Air Force Cross, the Silver Star with three clusters, the Distinguished Flying Cross with nine clusters, and twenty-five Air Medals. In 1972, he won the McKay Trophy for the most meritorious flight of the year and the Jabara Award for Airmanship.

Another Jabara Award Winner is Captain (now Retired Colonel) Donald D. Stevens, Class of 1960. Captain Stevens distinguished himself by extraordinary heroism while directing (in an unarmed O-2A), the successful rescue mission of a wounded soldier. While making dive passes directly into heavy enemy fire, Captain Stevens fired marking rockets between the soldier and the advancing enemy. He then gave careful and precise instructions to attacking fighter aircraft on the location of the soldier and the advancing enemy. His highly courageous acts resulted in the successful helicopter rescue of the wounded soldier without any friendly casualties.

Captain (now Retired Brigadier General) Dale E. Stovall, Class of 1967, led a formation of two HH-53 rescue helicopters deep into North Vietnam to pick up a downed airman. Captain Stovall braved heavy ground fire and MiG interceptors in an unsuccessful attempt to locate the downed airman. Despite being advised against returning for a second rescue attempt, Captain Stovall insisted on making another effort in finding him. On the second mission, Stovall spotted the airman's signal mirror and while receiving heavy ground fire he rescued the airman. During the course of the mission Captain Stovall and his crew braved MiGs, SAMs, antiaircraft, and small arms fire to successfully accomplish their mission. Captain Stovall received the Air Force Cross and the Jabara Award for his heroic actions.

Captain Charles T. McMillan II, Class of 1973, gave his life to rescue the 53 Americans being held hostage in Iran. Captain

McMillan volunteered for this mission and his willingness to risk his life for his fellow Americans and for the honor of our country, which will long serve as an inspiration to those who choose the Air Force way of life.

During Operation Desert Shield/Storm, graduates were once again called upon to distinguish themselves in service to their country. Five graduates were killed in action and four were captured and held as POWS.

One of those captured was Captain (now Lieutenant Colonel) William F. Andrews, Class of 1980. Captain Andrews was awarded the Air Force Cross and the Jabara Award for his heroic actions during the war.

As times passes, graduates of all ethnicities and genders have accomplished many things. The first female cadet wing commander was Lieutenant Colonel Michelle Denise Johnson, Class of 1981. Not only have graduates made differences in military operations, these well-rounded graduates exemplified their ability in American politics. Captain Heather Ann Wilson, Class of 1982, was the first woman veteran in American history to serve in Congress. A distinguished graduate, a Rhodes Scholar with masters and doctoral degrees in international relations from Oxford University in England. As an officer, she worked with our NATO allies and in the United Kingdom. Heather was re-elected to serve the citizens of New Mexico's 1st Congressional District on November 3, 1998, less than five months after she was first elected to the U.S. House of Representatives in a special election. Lieutenant Colonel Matthew Kipling Fong, USAFR, Class of 1975, was the highest elected Asian graduate, serving as California State treasurer.

In January 1993, Major (now Lieutenant Colonel) Susan J. Helms, Class of 1980, was the first woman graduate of the Air Force Academy to go into space as a mission specialist aboard the Shuttle Endeavor.

These are but a few of the men and women who have distinguished themselves in their various fields of endeavor. Some performed in an outstanding manner as cadets; however, most of them graduated without much recognition. These men and women developed the necessary qualities of leadership and character as cadets and later employed them in the Air Force and in service to our nation.

## Class Exemplar

The purpose of the Class Exemplar program is to provide a clear and visible attachment to the great leaders of the past for a new generation of air leaders who will face new challenges in the next millennium and beyond. The Class Exemplar serves as the honorary leader of the class, setting its personality and character. The Class Exemplar's model of innovative, pioneering leadership challenges cadets in each class to look forward into the Air Force they will soon be leading. The Class of 2000 was the first class to choose an Exemplar to lead them into the next millennium.

Class of 2000 Exemplar: *General James H. "Jimmy" Doolittle*

Class of 2001 Exemplar: *General William "Billy" Mitchell*

Class of 2002 Exemplar: *Captain Lance Peter Sijan*

## Cadet Insignia/Badges

**SUPERINTENDENT'S PIN:** Worn only by those cadets whose name appears on the Superintendent's list for obtaining a Grade Point Average, Military Performance Average, and a Physical Education Average of a 3.0.

**COMMANDANT'S PIN:** Worn by those cadets whose name appears on the Commandant's List for obtaining a Military Performance Average of a 3.0 or above for the previous semester. Fourth class cadets who achieve a 3.0 or better during Basic Cadet Training.

**DEAN'S PIN:** Worn by those cadets whose name appears on the Dean's list for obtaining a Grade Point Average of a 3.0 or above for the previous semester.

**ATHLETIC PIN:** Worn by those cadets who meet the following criteria: 3.0 Physical Education Average (PEA) or higher. The PEA is based on 50% P.E. Class grades from previous semester, 40% PFT score and 10% AFT score.

**CADET FLIGHT WINGS:** Worn by cadets who have soloed a USAFA glider, T-3, or USAFA Aero Club Aircraft while enrolled in an Airmanship course. Flight wings with star are worn by cadet instructor pilots (IP).

**CADET AVIATION INSTRUCTOR WINGS:** Worn by cadet aviation instructor. A star is added for a senior cadet aviation instructor.

**PARACHUTIST BADGE:** Worn by those cadets who have either completed Department of the Army Infantry School, Fort Benning, GA, or the Airmanship 490 Parachuting course taught by the Parachuting Branch of the USAF Academy. Senior and Master badges are awarded as authorized in AFR 35-5.

**RECONDO BADGE:** Worn by those cadets who have completed the Department of the Army's course in small unit combat leadership instruction conducted by the Fourth Infantry Division (Mech), Fort Carson, CO.

**BULLDOG BADGE:** Worn by those cadets who have completed the Marine Corps Bulldog program at Quantico, VA.

**AIR ASSAULT BADGE:** Worn by those cadets who have completed air assault school.



Superintendent's Pin



Comm/Ath. Pin



Comm/Dean's Pin



Commandant's Pin



Dean's Pin



Dean/Ath. Pin



Athletic Pin





Parachutist Badge



Cadet Aviation  
IP Wings



Bulldog Badge



Cadet Flight  
Wings



Cadet Soaring  
IP Wings



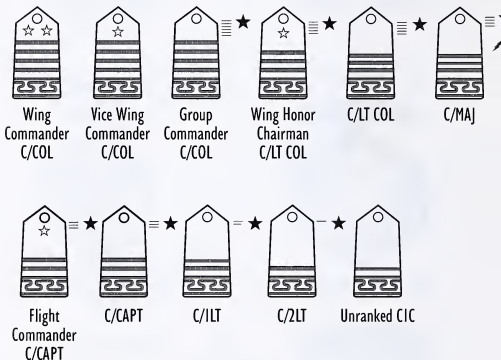
Recondo Badge



Air Assault Badge

## CADET RANKING/INSIGNIA

### 1st CLASS



### UPPER CLASS CAP INSIGNIA



PROP AND WINGS  
(GOLD IF RELATIVE WAS MEMBER OF ARMY AIR CORPS  
OR IF PARENT WAS IN THE MILITARY)

- ★ SUMMER PROGRAM RANK INSIGNIA WORN WITH BDUs
- ⚡ LIGHTNING BOLT ABOVE RANK INDICATES ATHLETIC TEAM CAPTAIN

# CADET RANKING/INSIGNIA

## 2nd CLASS



Wing  
SUPT  
C/CMSGT



Group  
SUPT  
C/CMSGT



C/SMSGT



Wing  
Staff  
C/MSGT



Group  
C/MSGT



C/MSGT



C/TSGT



C/Second  
Class  
Unranked

## 3rd CLASS



C/AMN



C/Third  
Class  
Unranked



C/Fourth  
Class

## 4th CLASS

No  
Shoulder  
Boards

C/BASIC

Cadet  
Wing  
Rank  
Insignia



Wing Color Guard  
NCO C/MSGT  
- Wing National  
Color Bearer  
C/MSGT



- Cadet Wing  
Command  
Post NCO  
C/TSGT



C/SSGT •

- General Officer Flag Bearer
- Wing Color Bearer
- Wing Color Guard
- Cadet Wing Command Post Messenger
- Wing Staff
- Vertical Diamond
- Group Staff
- Horizontal Diamond



**“Aurora”**

## The Falcon

Speed, courage, and powerful flight; these are terms symbolic of the mission of the United States Air Force. These also aptly describe the falcon, chosen by the first class to enter the Academy as the official mascot of the Cadet Wing.

The falcon is a noble bird that catches its prey in flight, killing on impact. It has keen eyesight, sharp talons, and a hooked beak for fighting. The fastest of all birds, the falcon can reach top speeds of 220 mph. Its ability to turn sharply and to streak only inches above the ground make it one of the most maneuverable birds.

The Class of 1959, in 1955, chose the falcon to be the Academy's mascot, but did not specify which species of falcon. Any of the falcon species native to North America—the gyrfalcon, peregrine, prairie, merlin, or kestrel—may be an Academy mascot. A peregrine falcon, named Mach 1, was the first falcon presented to the Academy on 5 October 1955.

A new falcon entered the Academy family with the Class of 2000. This falcon, purchased with funds donated by the Association of Graduates, is a female gyrfalcon. The Cadet Wing selected "Aurora" to be the new falcon's name (from the prototype spy plane Aurora).

The Academy also has several prairie falcons that are flown in demonstrations at football games and parades. These falcons are released and allowed to fly free toward a lure held by a cadet falconer.

The falcon's speed, powerful flight, temperament, and courage make it a fitting and proud mascot for the Air Force Academy.

# USAF Academy Cheers

## USAF Pre-Game

U-S-A-F-A  
Air ——— Force  
Fight! Fight! Fight!

\* \* \* \* \*

## Let's Go Air Force

“Let's Go Air Force [drum cadence].” *Repeat*

\* \* \* \* \*

## G-O, Go Falcons Go

“G-O, Go Falcons Go”

\* \* \* \* \*

## Slash 'em with a beak

Slash 'em with a beak!  
Rip 'em with a claw!  
Bring out the meat wagon!  
Rah! Rah! Rah!

## Slash 'em with a claw

Slash em with a claw!  
Rip 'em with a beak!  
Bring on the rah wagon,  
Meat! Meat! Meat!

\* \* \* \* \*

## USAF Post-Game

Sing the third verse of the Air Force Song.

\* \* \* \* \*

## HEY GANG!!!

Heeeeeeeeeeeeeeeey G-A-N-G!!!!!!!!!!!!!!

Y-e-a-h Man!!!!

What's the matter with the team????

The team's all right!!!!

W-H-A-T's the matter with the team????

The team's all right!!!!

W-E-L-L W-H-O says S-O????

E-V-E-R-Y-body!!!!

A-N-D WHO's Everybody!!!!!!!!!!

The A-F-A!!!!!!

Well, let's give 15 Rah's for the A-F-A!!!!!!

*(EMPHASIS on each word, one beat for each syllable)*

Hey Rah, Hey Ray, Hey Rah Rah Rah

*(Repeat 2 more times)*

Heeeeeeeeeeeeeeeeeeeeeey!!!!!!!!!!!!!!!!!!!!!!

\* \* \* \* \*

## FALCON FIGHT SONG

Fly you Falcons down the field; tear the  
enemy asunder!

Bare your talons, make them yield; give them  
all your thunder!

Spread your strong wings wide and high;  
fight for victory!

Never say die, keep flying high, for the  
Air Force Academy!

\* \* \* \* \*

“On the fields of friendly strife are sown the seeds that on other  
days and other fields will bear the fruits of victory.”

*General Douglas MacArthur*



### **Altimeter Check**

“Sir, my altitude is 7,258 feet above sea level—far, far above that of West Point or Annapolis.”



## The Cadet Prayer

Lord, God of hosts, my life is a  
stewardship in Your sight.  
Grant the light of Your wisdom to the path  
of my cadet days.  
Instill within me an abiding awareness of  
my responsibility toward You, my country  
and my fellowman.

I ask true humility that, knowing self,  
I may rise above human frailty.  
I ask courage that I may prove faithful  
to duty beyond self.  
I ask unfailing devotion to personal  
integrity that I may  
ever remain honorable without  
compromise.

Make me an effective instrument of Your  
peace in the defense of the skies that  
canopy free nations.  
So guide me daily in each thought, word  
and deed, that I may fulfill Your will.  
May these graces abide with me, my  
loved ones, and all who share my  
country's trust.  
Amen



**MISSION:** To provide leadership and service to the graduate community, support for the Academy mission, and preservation of institutional heritage and traditions.

## The Association of Graduates

The Association of Graduates (AOG) is the alumni association for the Academy. It is a nonprofit, self-supporting corporation located in its headquarters building, Doolittle Hall, on the Air Force Academy grounds. The Association was incorporated in 1968 to serve and support the Academy, cadets and graduates. Doolittle Hall is not a government building. It was built solely by donations from individuals and corporations. The AOG moved into Doolittle Hall in March 1992.

The AOG promotes many activities to serve USAFA graduates and keeps them informed of current Academy programs and planned projects. The AOG publishes for all members a quarterly magazine, *Checkpoints*, and an annual *Register of Graduates* to allow all graduates to stay in touch with friends and classmates. To serve its membership, the AOG offers a number of benefits, affinity programs, networking opportunities, and specialized memorabilia offerings.

Not only does the AOG serve its membership, it also supports the Academy and the Cadet Wing. For example, the AOG sponsors Homecoming and the Cadet Commanders Leadership Enrichment Seminars. The AOG also finds sponsors and provides funds for projects like the Graduate War Memorial, the Thunderbird Airmanship Overlook and the Rolls of Honor. In addition, the AOG helps fund cadet squadron heritage programs, provides financial support to cadet clubs and activities, and sponsors a variety of lecture series and cadet awards.

The AOG is an extremely active and exciting organization. The President and Board of Directors hope each member of the class of 2003 will survive the rigors of Academy life, meet its challenges, and join the AOG in supporting the mission of the Academy. Good luck over the next four years!

## Cadet Squadron Nicknames

When the first class entered the Academy in the summer of 1955, they were divided into four squadrons. In the years following, the number of squadrons gradually increased at an average of four to eight per year. By 1970, the size in the Cadet Wing reached its peak of forty squadrons. In June 1999, the squadrons were then drawn down, to the current strength of 36, due to the decreased strength of the Cadet Wing. In honor of almost 30 years of heritage we will continue to acknowledge squadrons 37-40 in Contrails.

Each squadron has its own insignia which is worn as a patch on the athletic jacket. Throughout the years some squadrons have changed their insignia several times, while others have remained the same. The current nicknames for each squadron are listed below.

Mighty Mach One	Blackjacks
Delta Tau Deuce	Raptors
Cerebrus Three	Barnstormers
Fightin Fourth	Phantoms
Wolfpack	Redeye
Bull Six	Barons
Shadow Seven	Thunderbirds
Eagle Eight	Blackbirds
Viking Nine	Black Panthers
Tiger Ten	Knights of Thirt
Rebeleven	Grim Reapers
Dirty Dozen	Roadrunners
Bulldawgs	Ratz
Cobras	Loose Hawgs
War Eagles	Wild Weasels
Chicken Hawks	Pink Panthers
Stalag 17	*Animalistic Skyraiders
Nightriders	*All-Stars
Wolverines	*Campus Rads
Trolls	*Warhawks

\* Disbanded June 1999

# Quotations

## Airpower/Doctrine

“Victory smiles upon those who anticipate the changes in the character of war, not upon those who wait to adapt themselves after the changes occur.”

*Italian Air Marshall Giulio Douhet*

“A good plan executed *now* is better than a perfect plan next week.”

*General George S. Patton Jr., USA*

“Offense is the essence of airpower.”

*General of the Air Force Henry H. “Hap” Arnold*

“A pint of sweat will save a gallon of blood.”

*General George S. Patton, Jr., USA*

“War makes extremely heavy demands on the soldier’s strength and nerves. For this reason, make heavy demands on your men in peacetime exercises.”

*German Field Marshall Erwin Rommel*

“In every battle there comes a time when both sides consider themselves beaten; then he who continues the attack wins.”

*General Ulysses S. Grant*

(not verified)

“War, once declared, must be waged offensively, aggressively. The enemy must not be fended off, but smitten down. You may then spare him every exaction, relinquish every gain, but ‘til then he must be struck incessantly and remorselessly.

*Alfred Thayer Mahan,*

*The Interest of America in Sea Power, 1896 (6) p. 220*

## Leadership

“When a man has strong qualities of leadership, but is of low moral character, there is always the danger that his subordinates will be influenced by his bad characteristics, to the detriment of the leader and of the group. But if the leader is a man of strong qualities of leadership and high moral character, he will endure and he will achieve better results.”

*Edgar F. Puryear Jr.*

“The discipline which makes the soldiers of a free country reliable in battle is not to be gained by harsh or tyrannical treatment. On the contrary, such treatment is far more likely to destroy than to make an army. It is possible to impart instruction and give commands in such a manner and such a tone of voice as to inspire in the soldier no feeling but an intense desire to obey, while the opposite manner and tone of voice cannot fail to excite strong resentment and a desire to disobey. The one mode or other of dealing with subordinates springs from a corresponding spirit in the breast of the commander. He who feels the respect which is due to others, cannot fail to inspire in them respect for himself, while he who feels, and hence manifests disrespect towards others, especially his subordinates, cannot fail to inspire hatred against himself.”

*Major General John M. Schofield, USA  
(from his graduation address to the West Point class of 1879)*

“The most important thing I learned is that soldiers watch what their leaders do. You can give them classes and lecture them forever, but it is your personal example they will follow.”

*General Colin J. Powell  
Chairman, JCS*

“Never tell people how to do things, tell them *what* to do and they will surprise you with their ingenuity.”

*General George S. Patton Jr., USA*

“The day soldiers stop bringing you their problems is the day you have stopped leading them. They have either lost confidence you can help them or concluded that you do not care. Either case is a failure of leadership.”

*General Colin J. Powell  
Chairman, JCS*

“Officers must be made to care for their men. That is the sole duty of all officers.”

*General George S. Patton Jr., USA*

“The power of excellence is overwhelming. It is always in demand and nobody cares about its color.”

*General Daniel S. “Chappie” James, USAF*

“I don’t mind being called tough, because in this racket, it’s tough guys who lead the survivors.”

*General Curtiss E. LeMay, Chief of Staff, USAF*

“You are always on parade.”

*General George S. Patton Jr., USA*

“Be an example to your men, in your duty and in private life. Never spare yourself and let your troops see that you don’t in your endurance of fatigue and privation. Always be tactful and well-mannered. Avoid excessive sharpness or harshness of voice, which usually indicates the man who has shortcomings of his own to hide.”

*German Field Marshall Erwin Rommel*

“Require nothing unreasonable of your officers and men, but see that whatever is required be punctually complied with. Reward and punish every man according to his merit, without partiality or prejudice; hear his complaints; if well founded, redress them; if otherwise, discourage them in order to prevent frivolous ones. Discourage vice in every shape, and impress upon the mind of every man, from the first to the lowest, the importance of cause, and what it is they are contending for.”

*President George Washington*

“No man is fit to command another that cannot take care of himself.”

*William Penn*

“An ounce of loyalty is worth a pound of cleverness. If you must vilify, condemn, and eternally disparage - resign your position, and when you are outside damn to your heart’s content; but as long as you are part of the institution, do not condemn it. If you do that you are loosening the tendrils that are holding you to the institution, and at the first high wind that comes along, you will be uprooted and blown away, and you probably never know the reason why.”

*Elbert Hubbard*

## **Duty**

“Duty, then, is the sublimest word in the English language. You should do your duty in all things. You can never do more. You should never wish to do less.”

*Attributed to General Robert E. Lee*

“Hold yourself responsible for a higher standard than anybody else expects of you. Never excuse yourself.”

*Henry Ward Beecher*

“If I do my full duty, the rest will take care of itself.”

*General George S. Patton Jr., USA*

“Duty, honor, country: Those three hallowed words reverently dictate what you ought to be, what you can be, what you will be. They are your rallying point to build courage when courage seems to fail, to regain faith when there seems to be little cause for faith, to create hope when hope becomes forlorn.”

*General of the Army Douglas MacArthur, USA*

“If you can’t get them to salute when they should salute and wear the clothes you tell them to wear, how are you going to get them to die for their country?”

*General George S. Patton Jr., USA*

“There is no limit to the good you can do if you don’t care who gets the credit.”

*General of the Army George C. Marshall*

“There is only one sort of discipline—PERFECT DISCIPLINE. Men cannot have good battle discipline and poor administrative discipline.”

*General George S. Patton Jr., USA*

## **Honor**

“He who permits himself to tell a lie once finds it much easier to do it a second and third time, till at length it becomes habitual; he tells a lie without attending to it, and truths without the world believing it.”

*President Thomas Jefferson*

“In matters of principle, stand like a rock; in matters of taste, swim with the current. Give up money, give up fame, give up science, give up earth itself and all it contains, rather than do an immoral act. And never suppose, that in any situation, or under any circumstances, it is best for you to do a dishonorable thing. Whenever you are to do a thing, though it can never be known but to yourself, ask yourself how you would act were all the world looking at you, and act accordingly.”

*President Thomas Jefferson*

“Integrity is the fundamental premise for military service in a free society. Without integrity, the moral pillars of our military strength, public trust, and self-respect are lost.”

*General Charles A. Gabriel, Chief of Staff, USAF*



"If I can't go back with my self-respect, I won't go back at all."

*Captain Theodore Harris, USAF*

*(After serving in solitary confinement for 14 months as a  
POW in Korea)*

"A man has integrity if his interest in the good of the service is at all times greater than his personal pride, and when he holds himself to the same line of duty when unobserved as he would follow if his superiors were present."

*General S.L.A. Marshall, British Army, Great Britain*

## Country

"What you have chosen to do for your country by devoting your life to the service of your country is the greatest contribution that any man can make."

*President John F. Kennedy*

*(Address to the Graduating Class, U.S. Naval Academy, 6 June 1961)*

"An officer's ultimate commanding loyalty at all times is to his country, and not to his service or to his superiors."

*General of the Army George C. Marshall*

"War is an ugly thing, but not the ugliest of things. The decayed and degraded state of moral and patriotic feeling which thinks that nothing is worth war is much worse. The person who has nothing for which he is willing to fight, nothing which is more important than his own personal safety, is a miserable creature and has no chance of being free unless made and kept so by the exertions of better men than himself."

*John Stewart Mill*

"When there is an enemy to fight in open combat . . . many serve, all applaud, and the tide of patriotism runs high. But when there is a long slow struggle, with no immediate, visible foe, your choice will seem hard indeed."

*President John F. Kennedy*

*(Address to the Graduating Class, U.S. Naval Academy, 6 June 1961)*

“It is the soldier, not the reporter, who has given us the freedom of the press. It is the soldier, not the poet, who has given us the freedom of speech. It is the soldier, not the campus organizer, who gives us the freedom to demonstrate. It is the soldier who salutes the flag, who serves beneath the flag, and whose coffin is draped by the flag, who allows the protester to burn the flag.”

*Father Dennis Edward O'Brien, Sergeant, USMC*

“Let every nation know, whether it wishes us well or ill, that we shall pay any price, bear any burden, meet any hardship, support any friend, oppose any foe, to assure the survival and success of liberty.”

*President John F. Kennedy  
Inaugural Address, 20 Jan 1961*

## GETTYSBURG ADDRESS

Fourscore and seven years ago, our fathers brought forth upon this continent a new Nation, conceived in Liberty, and dedicated to the proposition that all men are created equal. Now, we are engaged in a great Civil War, testing whether that Nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field as a final resting-place for those who gave their lives that that Nation might live. It is altogether fitting and proper that we should do this.

But, in a larger sense, we cannot dedicate, we cannot consecrate, we cannot hallow this ground. The brave men, living and dead, who struggled here, have consecrated it far above our power to add or detract. The world will little note nor long remember what we say here, but it can never forget what they did here. It is for us, the living, rather to be dedicated to the great task remaining before us; that from these honored dead, we take increased devotion to that cause for which they gave the last full measure of devotion; that this Nation, under God, shall have a new birth of freedom; and that government of the People by the People and for the People shall not perish from the earth.”

*Abraham Lincoln, Delivered on the 19th Day of November, 1863  
Cemetery Hill, Gettysburg, Pennsylvania*

## Air Force / Air Force Academy Vocabulary

- ABORT** (v.) to discontinue or abandon;  
(n.) an abandoned take-off (ground abort) or mission.
- BANDIT** (n.) bogey identified as unfriendly.
- BASE** (n.) installation owned and/or operated by the Air Force.
- BASE LEG** (n.) next to last leg of traffic pattern flown  
perpendicularly to runway.
- BENT WING** (n.) swept-back wing; (adj.) having bent wings, as  
a bent wing aircraft.
- BIRD** (n.) flying machine, usually an aircraft, but sometimes a  
missile.
- BLAST** (n.) shock effect of nuclear explosion; also upperclass get-  
together characterized by its informality.
- BLUE MAGNET** (n.) a bed comforter made especially for cadets  
that emits a magnetic pull.
- BOGEY** (n.) unidentified flying object or radar blip.
- BOMB** (v.) do extremely poorly, as to "bomb a GR".
- BOOM** (v.) that part of a gas-passer that provides fuel.
- BRAIN BUCKET** (n.) crash helmet.
- BRAT** (n.) son or daughter of a military family.
- BREAK** (v. or n.) steep turn either from a formation or in a traffic  
pattern.
- BUY THE FARM** (v.) to crash.
- CANOE U.** (n.) a small school which forms a suburb of the  
capital of Maryland with a campus partly on land and partly in  
the Severn River.
- CEILING** (n.) that level of altitude where the sky becomes more  
than one-half obscured by clouds as seen by an  
observer on the ground.
- COMM SHOP** (n.) that organization coming under the control of  
the Commandant and consisting of those departments  
directly affecting the Cadet Wing.
- CONTRAILS** (n.) [condensation trails] a visible trail of water  
droplets or ice crystals formed in the wake of an  
aircraft flying at high altitude.

- CONVERTER** (n.) the T-37, since it converts JP-4 fuel directly to noise.
- CRASH** (n.) a landing in which the vertical velocity is so great and the time spent reducing it to zero is so brief that the acceleration and hence the forces acting become so great as to result in structural failure.
- CRETIN** (n.) that person ill disposed at doing acts of nominal coordination or acts requiring minimal thought.
- CREW CHIEF** (n.) enlisted person or NCO in charge of maintenance of a certain aircraft.
- DOOLIE** (n.) that insignificant whose rank is measured in negative units; one whose potential for learning is unlimited; one whose days until graduation approaches infinity; a fourth class cadet.
- DOWNWIND** (n.) the leg in a traffic pattern which is parallel to the runway and with the wind.
- DRAG** (n.) a resistant force exerted in a direction opposite to the direction of motion.
- ESCAPE VELOCITY** (n.) the initial velocity needed by an object to overcome the pull of gravity.
- FIGMO** (adj.) that state of being which causes one to place a de-emphasis on matters of military or other importance and proceed to kiss it off.
- FINAL** (n.) the last leg of the traffic pattern, the aircraft approaching the runway in the direction of landing (correctly called FINAL APPROACH).
- FIRSTIE** (n.) that immortal having superhuman powers and disposed to acts of great wonder and cunning; a first class cadet.
- FLAMEOUT** (n.) engine failure in a jet engine when combustion no longer takes place.
- FULL BORE** (adv.) throttle full open.
- GARBAGE** (n.) hardware on an aircraft which can be retracted, usually including flaps, landing gear, and speed brakes.
- GLASS CAGES** (n.) cadet in charge of quarters complex (Sijan and Vandenberg Halls).

- GROUND POUNDER** (n.) non-flying officer.
- HACK** (n.) a time synchronization. (v.) to do; to get through, as in “hack the course”; ability to cope with a situation, as in “he can’t hack it.”
- HEAD SHED** (n.) those organizations and departments on or falling under the jurisdiction of the Superintendent and their staff.
- HUDSON HIGH** (n.) a little school on the Hudson River having 193 years of tradition unhampered by progress.
- HYPERSONIC** (adj.) speed in excess of Mach 5.
- HYPOXIA** (n.) oxygen lack.
- INITIAL** (n.) entry leg into a traffic pattern.
- INTERDICTION** (n.) bombing of points on the enemy’s supply route in attempt to cut off their supply line.
- INTRAMURDER** (n.) athletic competition between squadrons.
- JETSTREAM** (n.) a high velocity wind usually occurring just below the tropopause in temperate zones.
- JOCK** (n.) that individual performing superhuman feats of physical dexterity; an athlete.
- LIFT** (n.) the force upon an aircraft that acts in an upward direction opposing the pull of gravity.
- LOX** (n.) Liquid Oxygen – a widely used oxidizing agent in missile and rocket fuels, also used in some aircraft oxygen systems.
- MACH** (n.) the speed of sound; unit of measurement of speed in relation to the local speed of sound, such as “.9 Mach or Mach 1.”
- MAX** (n. or adj.) the maximum: 100%; (v.) to achieve the maximum, as in to “max a quiz.”
- NINO BALDACCI** (n.) that individual having entered with the class of ’59 and remaining until the present time never having been off academic probation and never having taken a privilege. He is a perpetual turnback near and dear to all cadets.
- OPS** (n.) contraction for “operations,” as in Base Ops.
- ORBIT** (v.) to circle.

- POST** (v.) an order signifying to a subordinate that their presence is no longer desired.
- PITCH** (n.) rotation about the lateral axis of an aircraft.
- PORT** (adj.) to the left of the front, or bow, of a ship.
- PRO** (adj.) short for “probation.
- PROP** (n.) a third class cadet.
- RACK** (n.) that piece of furniture in a cadet room with magical luring powers, (v.) to rack.
- ROCK** (n.) that superhuman free from entanglements with the opposite sex.
- ROLL** (n.) rotation about the horizontal axis of an aircraft.
- SANDBAG** (v.) to participate in a flight without performing the duties of a crew member; to go along for the ride.
- SCRAMBLE** (v.) to get an aircraft or missile in the air, ready for combat, in the shortest possible time; (n.) the act of scrambling.
- SLUG** (n.) a lesser form of life who attempts to refuse to accept full responsibility for his or her own action, usually leaving a trail of slime for others to clean up, thus earning the utter disgust of all forthright cadets. There are no slugs on the tourpads.
- STARBOARD** (adj.) to the right of the front, or bow, of a ship.
- SUPER DOOLIE** (n.) one of those who are given authority without the responsibility to fulfill their mission; a third class cadet.
- THRUST** (n.) a propelling force exerted on an aircraft or missile.
- TOWER** (n.) control tower; the level in the Dining Hall where Wing Staff eats (usually STAFF TOWER).
- TRUCK DRIVER** (n.) pilot of an aircraft with more than one engine.
- TWO** (n.) [see also POST] a command relating to the subordinate to return to whatever they were occupied with before being interrupted.
- VATOR** (n.) an ingenious device designed to fail when the wing returns from holidays or is in the process of moving rooms; as in “hold the . . .”

**VERTIGO** (n.) a condition in which one has the false sensation of turning or falling, usually accompanied by a loss of spatial orientation; uncertainty of the attitude of the aircraft.

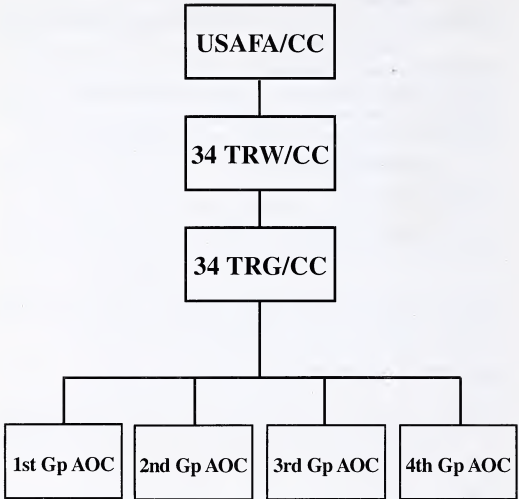
**VISIBILITY** (n.) the maximum distance at which objects can be clearly distinguished.

**WING** (n.) a second class cadet.

**YAW** (n.) rotation about the vertical axis of an aircraft.

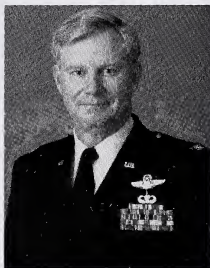
**ZILCH** (n.) opposite of max; nothing.

**ZOOMIE** (n.) that term by which a cadet is commonly known among jealous civilians.





## 34th Training Group



**Col Daniel W. Jordan, III**  
**Commander 34th Training Group**

Colonel Dan Jordan is the Commander, 34th Training Group, United States Air Force Academy, CO. As commander, he is directly responsible for the training, welfare, morale, discipline, and performance of the 4,000-member Cadet Wing and 177 officer, enlisted, and civilian personnel.

He entered the Air Force in 1976 after graduation from the United States Air Force Academy. After graduation from undergraduate pilot training in August 1977, he became an aircraft commander in the A-7D at England AFB, LA. In September 1979, he became a forward air controller and OV-10 pilot in the 19th Tactical Air Support Squadron, Osan AB, South Korea. In October 1980-1982, Fort Bragg, NC. After a tour as instructor pilot and flight commander in the F-16A at Hill AFB, UT, he reported to Nellis AFB, NV, in 1986 and became the Chief of Aircrew Training for the F-117 Stealth Fighter. In 1990, after graduating from Army Command and General Staff College, Fort Leavenworth, KS, Colonel Jordan reported to Headquarters 4th Allied Tactical Air Force, Heidelberg, Germany, for joint duty as a special plans officer. After completion of Air War College in 1993, Colonel Jordan reported to Luke AFB, AZ, as operations officer for the 309th Fighter Squadron, and then commander, 61st Fighter Squadron, the largest F-16 squadron in the world at that time. Prior to assuming command of the 34th Training Group, Colonel Jordan was the Deputy Commander, 71st Operations Group at Vance AFB, OK. He arrived at the United States Air Force Academy and assumed his present duties in April 1998.



Lt Col Scott W. Johnson  
AOC, 1st Group



Lt Col Debbie D. Gray  
AOC, 2nd Group



Lt Col Robert B. Patterson  
AOC, 3rd Group



Lt Col Michael D. Bradley  
AOC, 4th Group



**Oh, Yea!!!**

## Air Force Chain-of-Command

Commander-in-Chief: \_\_\_\_\_

Secretary of Defense: \_\_\_\_\_

Secretary of the Air Force: \_\_\_\_\_

Air Force Chief of Staff: \_\_\_\_\_

Superintendent: \_\_\_\_\_

Commandant of Cadets:  
(34th TRW Commander) \_\_\_\_\_

34th TRG Commander: \_\_\_\_\_

Group Air Officer  
Commanding: \_\_\_\_\_

Squadron Air Officer  
Commanding: \_\_\_\_\_

Military Training Advisor (MTA): \_\_\_\_\_

# Cadet Chain-of Command

## The Line

### Fall Semester

Wing Commander: \_\_\_\_\_

Group Commander: \_\_\_\_\_

Squadron Commander: \_\_\_\_\_

Operations Officer: \_\_\_\_\_

Flight Commander: \_\_\_\_\_

Element Leader: \_\_\_\_\_

### Spring Semester

Wing Commander: \_\_\_\_\_

Group Commander: \_\_\_\_\_

Squadron Commander: \_\_\_\_\_

Operations Officer: \_\_\_\_\_

Flight Commander: \_\_\_\_\_

Element Leader: \_\_\_\_\_

## 1999-2000 Academic Calendar

10 Aug	Academic Classes Begin
3 - 6 Sep	Parent's Weekend and Labor Day Holiday
11 Oct	Columbus Day Holiday
23 - 28 Nov	Thanksgiving Weekend
11 - 12 Dec	Study Days
13 - 18 Dec	Final Exams
18 Dec - 4 Jan	Christmas Break
6 Jan	Academic Classes Begin
17 Jan	Martin Luther King Jr. Holiday
21 Feb	President's Day Holiday
17 - 26 Mar	Spring Break
13 - 14 May	Study Days
15 - 20 May	Final Exams
21 - 26 May	Summer Prep Week
27 May - 31 May	Graduation Week
29 May	Memorial Day
31 May	Graduation Day

## 1999 Air Force Football Schedule

<b>Sep 04</b>	<b>Villanova*</b>
Sep 18	Washington
<b>Sep 25</b>	<b>Wyoming*</b>
Oct 02	San Diego State
Oct 09	Navy
<b>Oct 16</b>	<b>Utah* (Homecoming)</b>
Oct 30	BYU
<b>Nov 06</b>	<b>at Army*</b>
<b>Nov 13</b>	<b>UNLV*</b>
Nov 20	CSU
Nov 27	New Mexico

\* Home games in **BOLD**

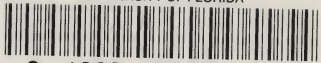








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**FLARE**



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